The Golden Hands Encyclopedia of

CRAFTS

The complete guide to
traditional and modern home crafts

Volume 13

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Golden Hands Encyclopedia of

CRAFTS

INSTITUTE OF EDUCATION FOR WOMEN
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CALCUTTA

Marshall Cavendish

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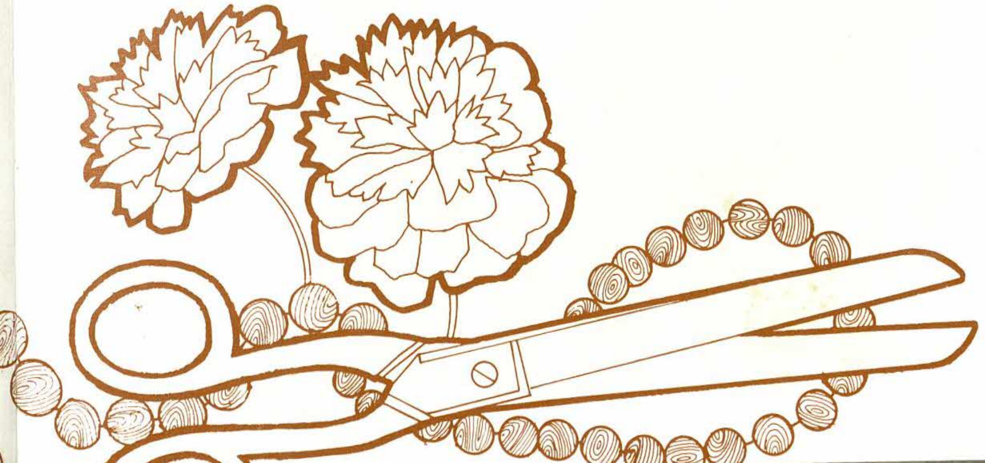

*** Not suitable for children without adult supervision**

Suppliers addresses
United Kingdom

Please send a s.a.e.
with any enquiries to
the suppliers below

Creative Ideas 51. Plastic wine-making tube at Boots the Chemists. Seed and round beads at Ellis & Farrier, 5 Princes St, Hanover Sq, London W1R 8PH and Hobby Horse, 15 Langton St, London SW10 (catalogue 25p including postage), who all also offer mail order service. Blouse at Harrods, Knightsbridge, London SW1.

Clay 31. Clay and tools at The Fulham Pottery Ltd, 210 New King's Rd, London SW6 4NY; or at Southern Supplies Centre, 42 Morley Rd, Tonbridge, Kent; Harrison Mayer Ltd, Meir, Stoke-on-Trent ST3 7PX; Ferro (Great Britain) Ltd, Wombourne, Wolverhampton WV5 8DA who also supply overseas; Wengers Ltd, Garner St, Etruria, Stoke-on-Trent, Staffs ST4 7BQ.

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Sewing 14. Glyntaf bedspread in brown stripes from John Lewis, Oxford St, London W1 and branches.

Ropework 2. Rope at hardware stores or suppliers of camping and sailing equipment. Or by mail order from Ropecraft, 13 Seamoor Rd, Westbourne, Bournemouth, Dorset BH4 9AA and Arthur Beale, 194 Shaftesbury Ave, London WC2.

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Glass 12. Glass wheel cutter, glazier's pliers and gas soldering irons (special order only), glass and lead at Chelsea Glass works, 105 Fulham Rd, London SW6.

Glass 13. Glass paints at Windsor & Newton, 51 Rathbone Place, London W1P 1AB (also offers mail order service).

Weaving 15. Large loom from Dryad Ltd, PO Box 38, Northgates, Leicester LE1 9BU. Small loom from Bradley Inkle Looms, 82 North Lane, East Preston, Sussex BN16 HE (also offer mail order) and Handweaver's Studio & Gallery, 29 Haroldstone Rd, London E17.

Weaving 16. See addresses Part 49. Skirt and blouse at Harrods, Knightsbridge, London SW1. Espadrilles at Jo and Ada Bloggs, 187 Wardour St, London W1. Rug photographed at Heals, 196 Tottenham Court Rd, London W1.

All the above supply by mail order service. For yarn see addresses for Weaving chapter 5. Basket at Way In, Harrods, Knightsbridge, London SW1.

Sewing 13. White socks and jumper at John Lewis, Oxford St, London W1.

Sewing 15. Roller blind kit at John Lewis, Oxford St, London W1 and branches.

Plastics 17. Gold and copper dust at Thomas Keep & Sons Ltd, 15 Theobalds' Rd, London WC1 who also offer mail order service.

Edible Arts 5. White fluted dish at David Mellor, 4 Sloane St, London SW1W 8EE who also offer mail order service. Sundae glass, china heart and small baskets at The Neal Street Shop, 29 Neal St, London WC2. Paper tablecloth at Paperchase, 216 Tottenham Ct Rd, London W1. Cushion and fabric at Nice Irma's Floating Carpet, 46 Goodge St, London W1.

Design know-how 50. Letrafilm at art supply shops and good stationers. 'The words Letraset, Spacematic, Instant Lettering and other words starting with Letra are Trade Marks of Letraset International Ltd and are widely protected by registration.' A Winsor & Newton Pantograph, and Flexicurves at Cowling & Wilcox Ltd, 26 Broadwick St, London W1.

Soft sculpture 2. Foam at Pentonville Rubber Company Ltd, 52 Pentonville Rd, London N1 and Brian's Foam Shop, 13 Harwood Rd, London SW6 (personal shoppers only).

Paper 36. T-shirt from a selection at Selfridges, Oxford St, London W1.

Metal 18. Ronson Blowtorch at hardware and DIY shops. White poloneck sweater at Harrods.

Beadwork 8. Beads, gilt pins, metal backing plates and chains at Ells & Farrier, 5 Princes St, Hanover Square, London W1R 8PH who also offer mail order service. Short sleeved top at Harrods.

Basketry 12. Rushes at Colorcraft, 1 Emson Close, Saffron Walden, Essex CB10 1HL for personal shoppers only.

Lapidary 5. Clear cast resin and catalyst at Trylon Ltd, Wollaston, Northants. Paperweight moulds at Turner Research Ltd, Cross Green Garth, Leeds 9 (also offer mail order). Cold Clay at The Fulham Pottery Ltd, see under Clay. Das at hobby shops & branches of W. H. Smiths & Daleboard Craft Shops, or write to Wiggins Teape (Toys & Crafts) Ltd, Hubert Road, Brentwood, Essex. Metal table frames at Michel & Polgar, 41 Blandford St, London W1.

Pin art 4. Gimp pins and copper wire at hardware stores. Foundation board at wood merchants.

Carpentry 17. Tools at Burgess & Galer Ltd, 51 Brewer St, London W1.

Metrication

In this volume you will find two systems of measurement. The first set of figures refers to the metric system and the Imperial figures follow in brackets. Wherever possible, a commonsense approach has been adopted and both sets of measurements have been worked out in round numbers. **BUT BEWARE!** This means that metric and the Imperial figures are *not* equivalent so make sure you only work with one or other set of figures.

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Creative ideas 48

French knitting a hat

French knitting makes smart work and producing the very long tube to style into this hat is an undemanding task.

You will need:

5 skeins of random-dyed knitting wool.

1 skein of plain wool in a complementary colour.

Needle, thread, pins.

Polystyrene wig stand, cotton wool and an old stocking.

Wooden cotton reel and a darning needle.

Measure your head size (see Millinery chapter 3, page 624) and pad the wig stand with cotton wool to correspond. To secure in position stretch an old stocking over the padding and pin. Check measurements as you pad to see they are correct.

Prepare a wooden cotton reel and french knit (see Creative Ideas 22, page 617) a long rope at least 14.40m (16yds) long.

Do not cast off, but secure with a knot in the rope near the reel.

Starting at the centre of the crown on the wig stand pin the beginning of the rope to it.

Continue to coil and pin the rope into a cap shape. Make sure the rope is not twisted. Work more rope if necessary.

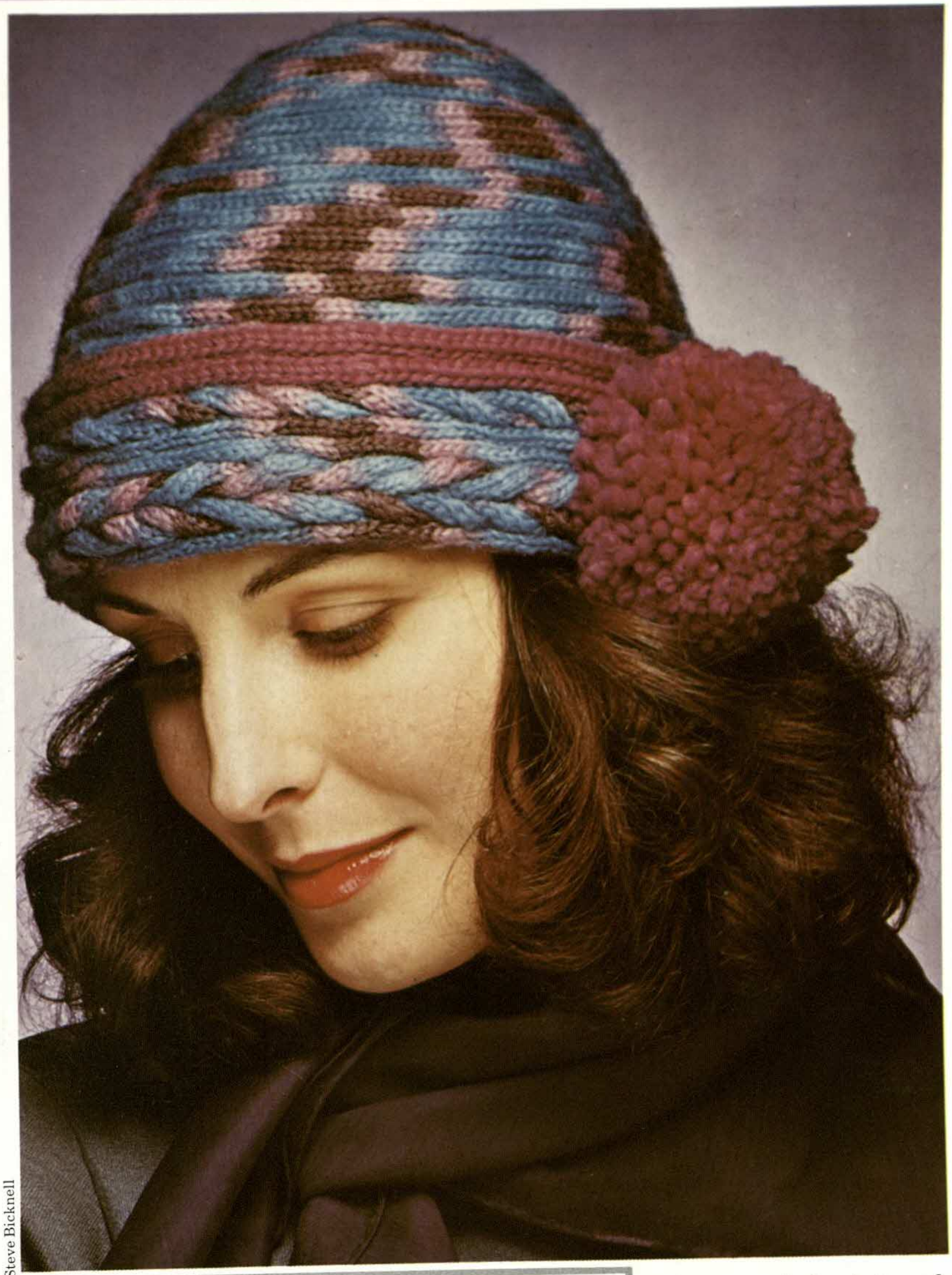
Now tack the coils together from crown to edge removing the pins as you go (fig.1).

Try on the cap, work more rope if you need more depth. Cast off and sew in end to neaten.

Replace cap on stand and work the brim. Determine the length of rope needed by measuring around the cap edge and multiplying by as many coils as you wish to make the depth of brim. Coil this rope around the cap edge to form brim, tack together and attach to cap edge.

French knit a rope of plain colour for edging.

Decorate the brim with twists or plaits.



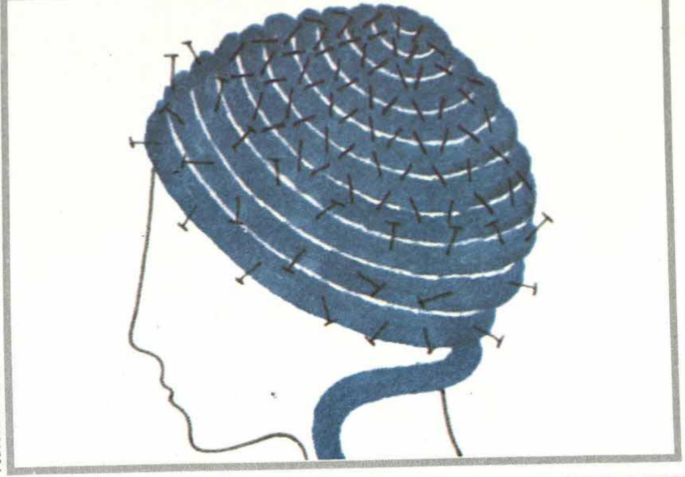
Steve Bicknell

A smart cloche hat made from a coiled rope of french knitting, designed by Stacy Carr.

To make a twist, measure twice around the cap and twist two ropes of this length together.

For a plait, measure three times around the cap.

Make a pompon (see Creative Ideas 8, page 225) and attach to the side.



Victoria Drew

1. *Coil and pin rope in place first, then tack together removing pins as you work.*

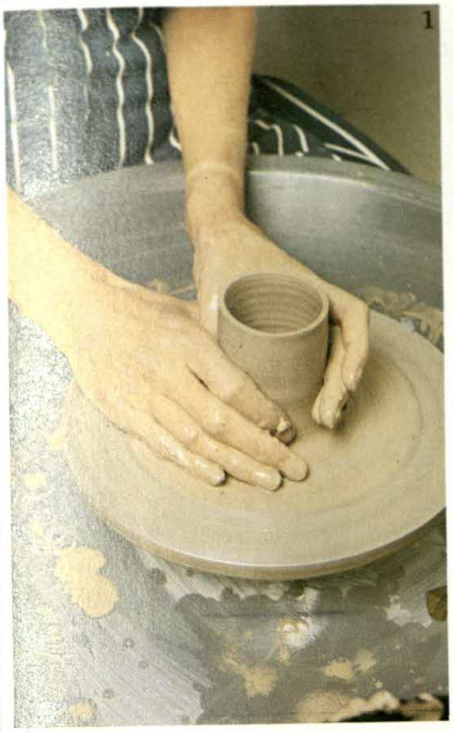
Ways to adapt a cylinder

Clay 31

Clay chapter 30, page 1322 describes how to throw a cylinder. This chapter looks at a few of the most practical ways of working with cylinders—adapting the basic shape itself to vary the style and adding handles to it.

Hand-thrown mugs designed by (left to right) *Frank Smith, West Marshall, Emmanuel Cooper;* (front) *Russell Collins.*

Jerry Tubby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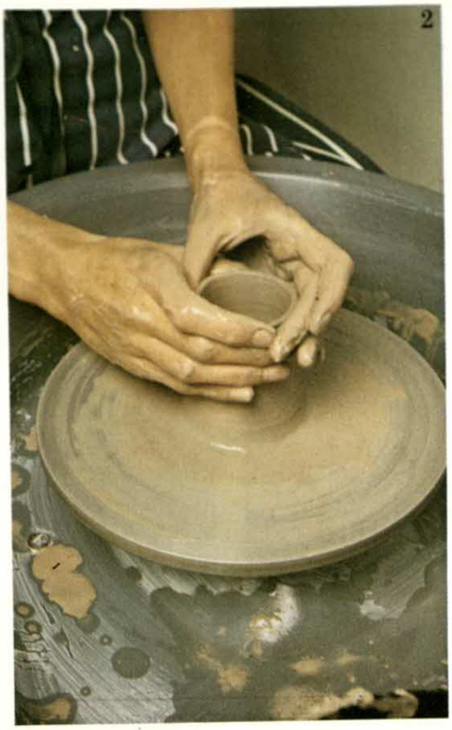
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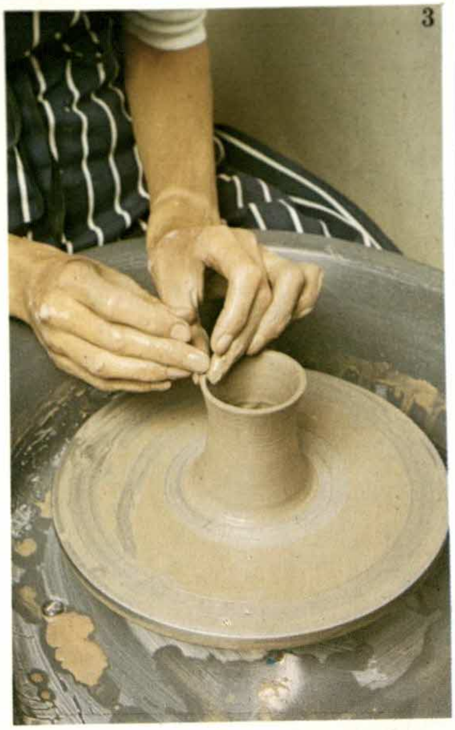
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Collaring a cylinder

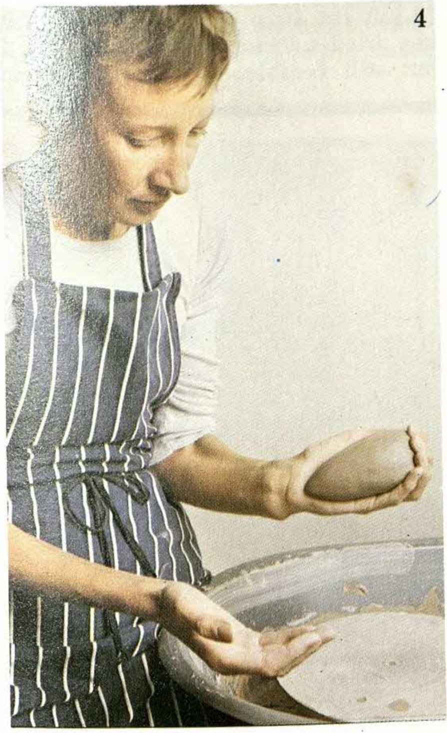
If you are tired of throwing straight cylinders, vary the shape so that each one is concave in the middle. The technique used is called 'collaring'.

☐ Pull up a cylinder to the size you want, as described in Clay chapter 30, page 1322. Keep the wheel turning at the same speed.

☐ Moisten your hands and place them around the outside of the cylinder (fig.1).

☐ Apply very gentle pressure inwards with both hands. Move your hands steadily up the cylinder, releasing the pressure towards the top (fig.2).

☐ Finish off the rim of the collared cylinder in the usual way (fig.3).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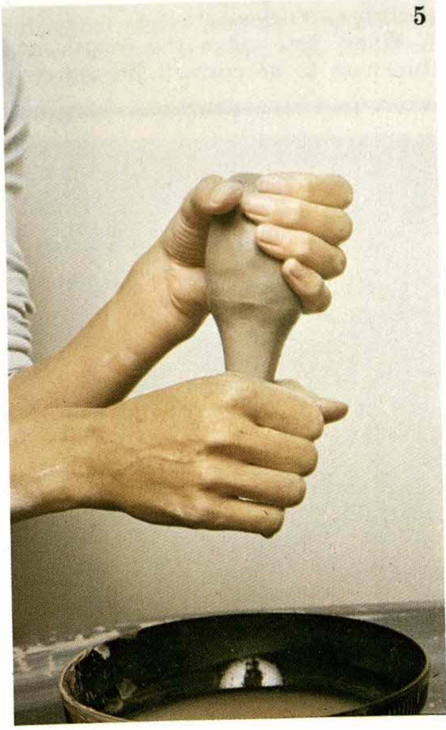
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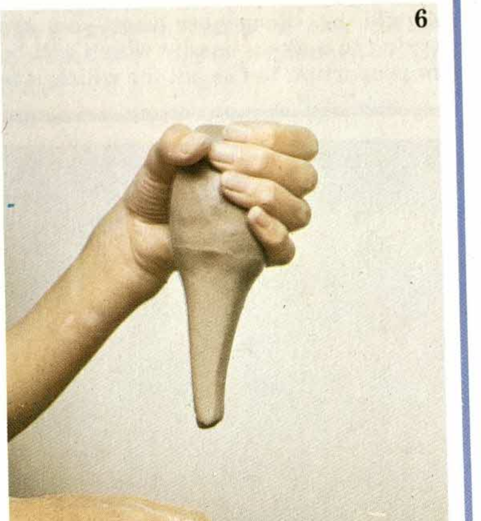
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Nelson Hargreaves

Handles

If a handle is required it should be attached to the cylinder at the leather-hard stage. The best way to produce a strong, well-shaped handle is to pull it.

You will need:

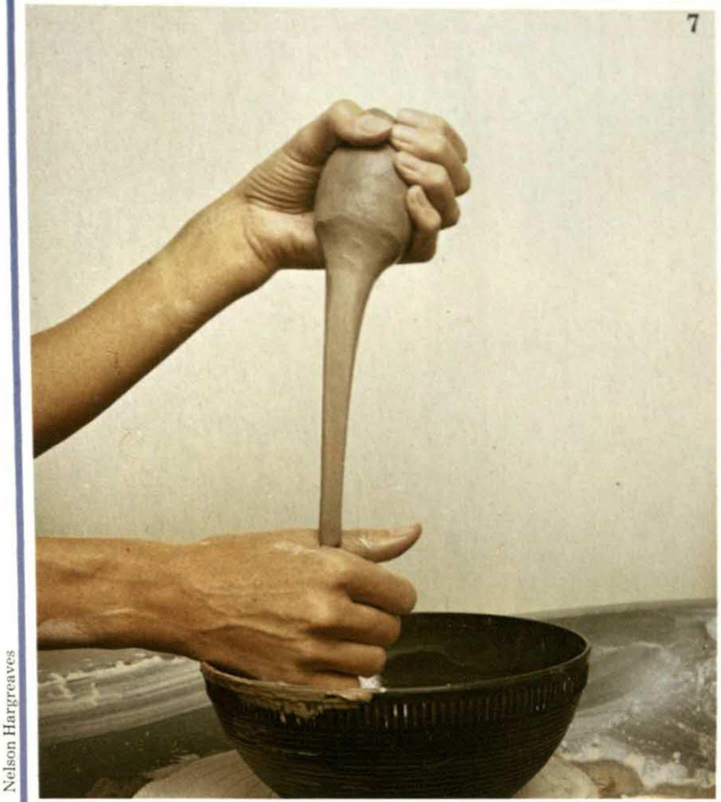
About 1kg (2lb) of prepared clay, slightly stiffer than for throwing.

Piece of asbestos board about 30cm (12″) square.

Needle, stuck in a cork for ease of handling.

☐ Take the lump of clay in the palm of one hand and then smack it firmly from palm to palm until it is cone-shaped (fig.4).

☐ Take the wide end of the cone of clay in your left hand, wet your right hand, and gradually stroke the pointed end of the cone downwards, with a milking motion (figs.5 and 6).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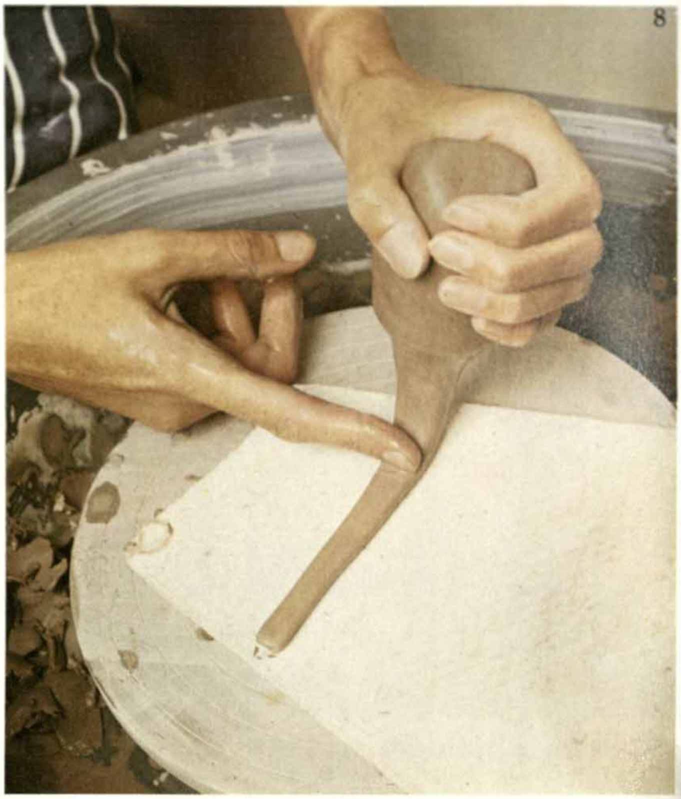
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Nelson Hargreaves

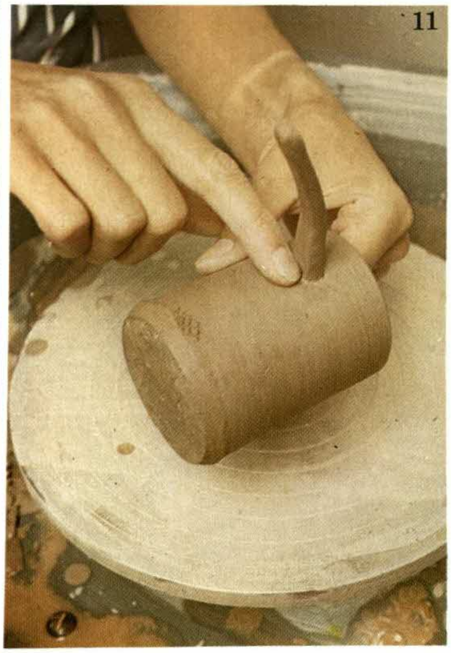
☐ Continue to stroke the clay in this way until you have produced a long, narrow strip (fig.7).

Only experience can tell you just how long and how thick this strip of clay should be. Remember that you are trying to make a handle which will be in proportion to the pot for which it is intended, and which will be strong enough to support it, perhaps when it is full of liquid. Remember, also, that this strip of clay is wetter than the leather-hard pot and will shrink slightly as it dries.

☐ When you judge the length and thickness to be correct, lie the strip along the piece of asbestos board and nip it off with your forefinger (fig.8).

☐ Wait a few moments for the handle to dry off very slightly. The asbestos board speeds up this process.

☐ Lift the strip carefully to see if it has dried sufficiently. It must be stiff but still flexible. If you allow it to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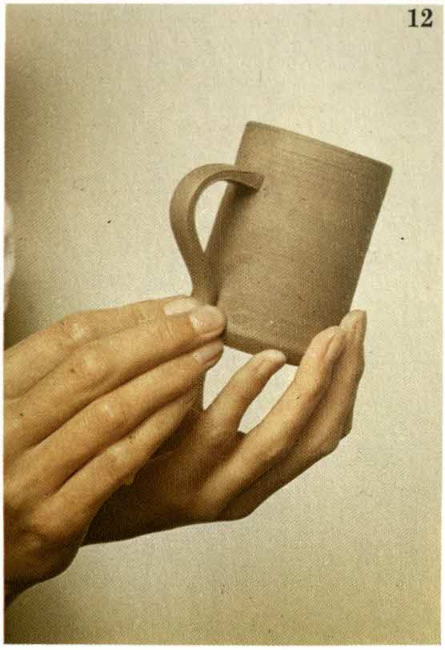
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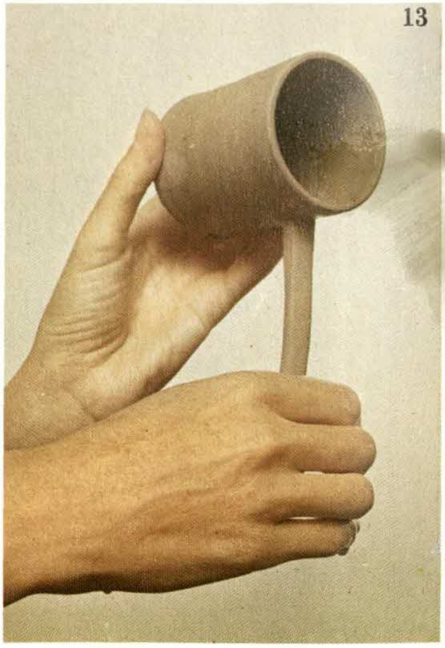
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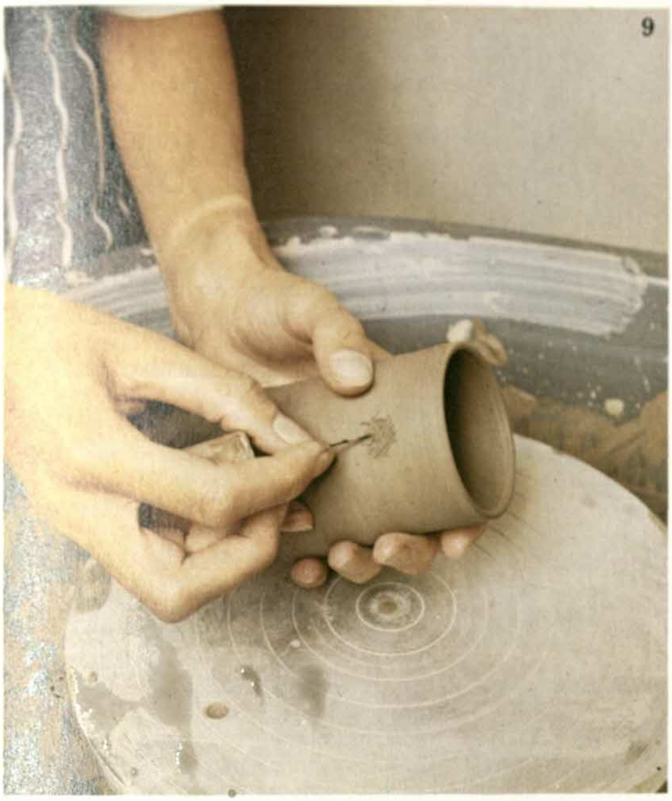
☐ Using the left hand to support the pot from the inside, smooth the edges of the clay strip with your forefinger so that the join blends in with the body of the pot (fig.11).

☐ When the top of the handle is firmly in place, bend the clay strip into a loop and place the end against the lower scratched area (fig.12).

Before pressing the bottom of the handle into place, check that the loop is the width you want.

The handle should have a good springy curve which should be wide enough to accommodate your fingers.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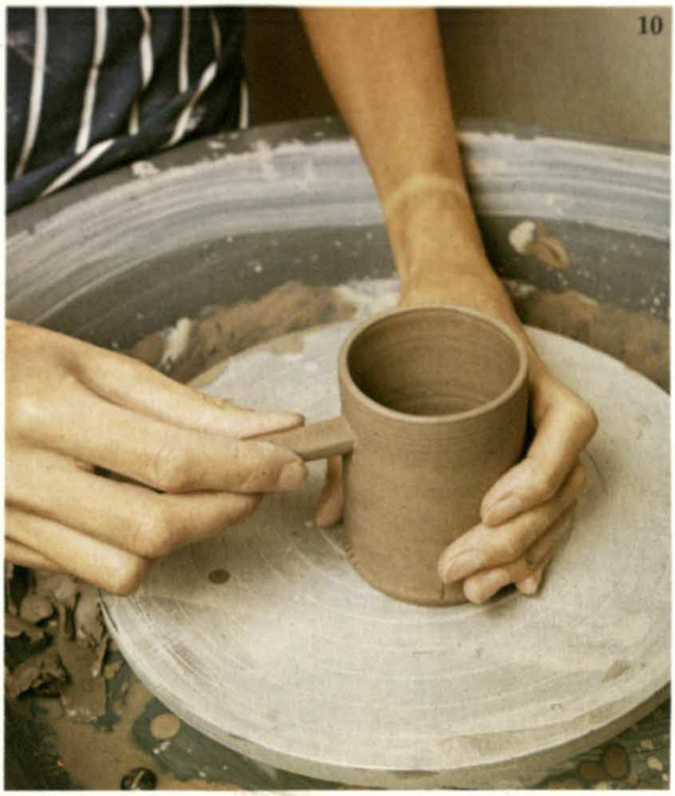
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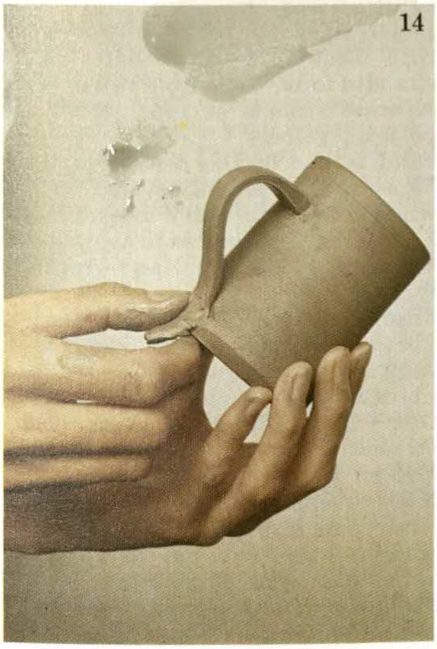
become too dry it will crack when you try to bend it and if it is too wet it will stick to your fingers or collapse. In either case you must start again.

☐ Now take the leather-hard cylinder and use the needle to scratch the surface in the two places where the handle is to be attached (fig.9).

In the design illustrated, the top of the handle is attached about one third of the way down the pot, and the bottom attached almost at the base. In general, the placing of the handle is a matter of individual taste, bearing in mind the shape of the pot and its intended function.

☐ Dip your finger in the slip which has collected in the wheel tray and smear it on the upper scratched area and on the end of the clay strip.

☐ Supporting the pot with the left hand, press the strip of clay firmly against the upper scratched area (fig.10).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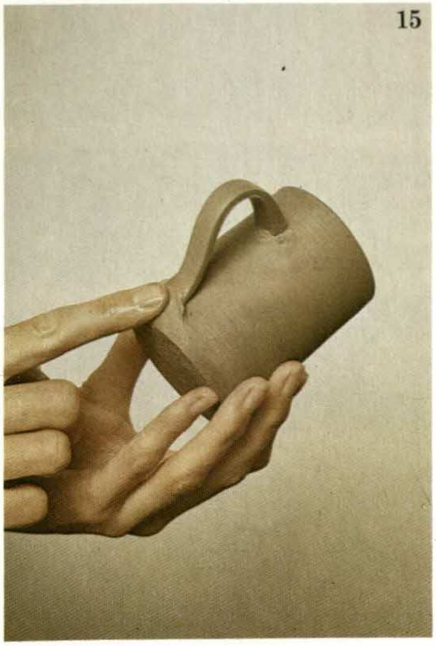
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16

Jerry Tubby

☐ If the loop is too short it may be necessary to pull out the strip of clay a little more (fig.13).

☐ When you have achieved a satisfactory loop, use slip, as before, to press the bottom of the handle firmly into place. Nip off any surplus with your thumb and forefinger (fig.14).

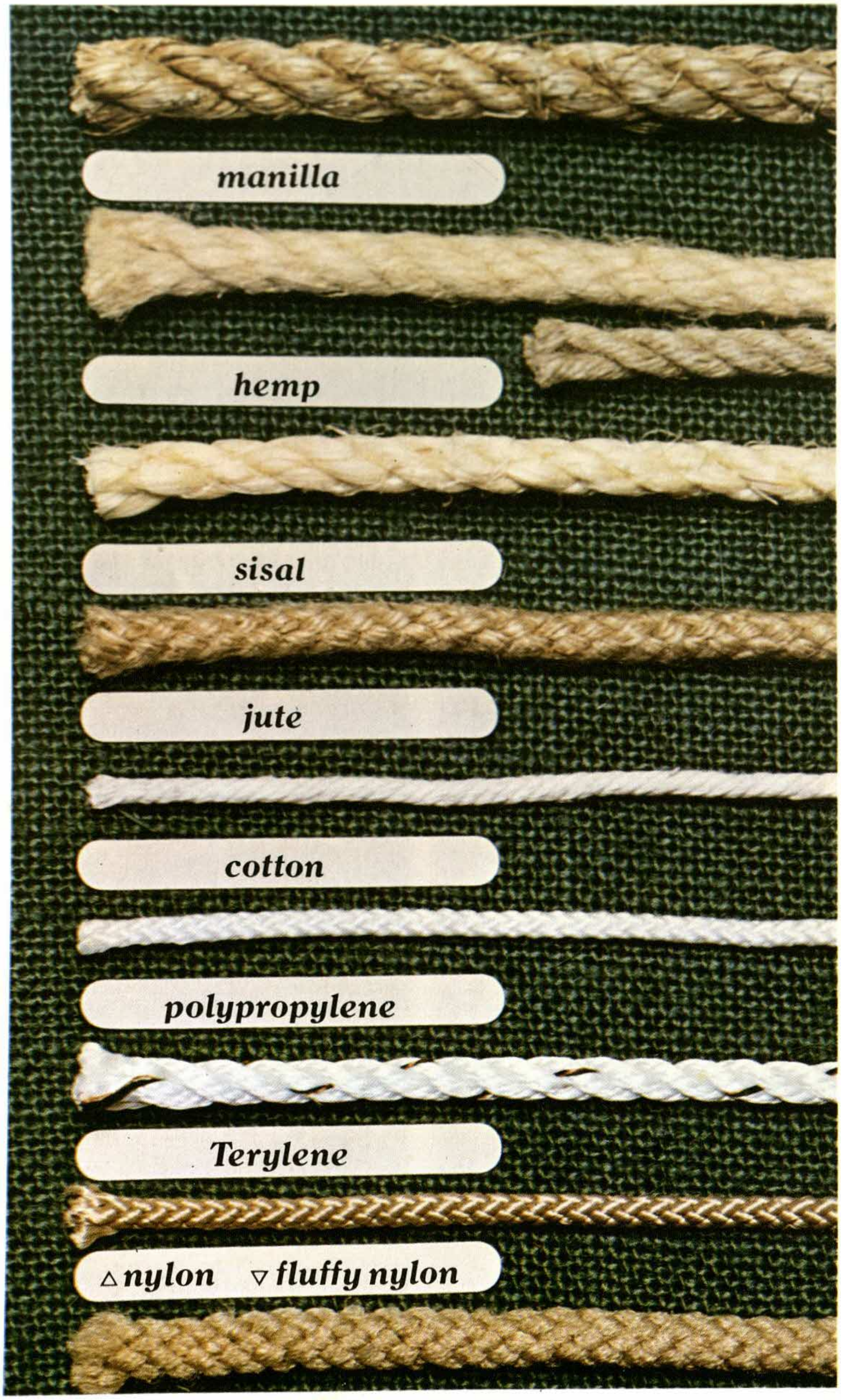
☐ Use your forefinger to press the bottom of the handle firmly home and to smooth the join (fig.15).

☐ From a simple cylinder you have created an attractive and serviceable mug which can be glazed and fired in the usual way (fig.16).

Re-cycling cans with rope

An unusual way of using rope is to wrap it round furniture which is shabby or round an item which otherwise might be thrown away. Things which can be rejuvenated or re-cycled in this way are chairs, oil cans, jars, pots of many kinds, the legs of a table, a strutted bedhead and banisters; rope can even be used on the fronts of cupboard doors or drawers if it is coiled and glued instead of wrapped.

Rope is a useful yarn for craft work and it is available in a surprisingly wide range of fibres and textures.



Dick Miller

Types of rope and twine

Ropes and twines (string is not a term used for thin grades by the makers as they consider it too vague) may be made from natural fibres, such as manilla, hemp, sisal, jute or cotton, or from synthetics such as Terylene, nylon and polypropylene.

Those made from natural fibres are easier to handle in the heavier sizes but they do have the disadvantage of discolouring and decaying if they are kept permanently damp. However, they can be washed if they are dried quickly. Ropes made from synthetic fibres tend to be lighter in weight and cheaper than the same sizes in natural fibres, they do not decay under damp conditions, they can be washed and they are available in a variety of colours. Thinner grades are easier to handle for craft work than the thicker ones which tend to be very springy.

Manilla and hemp. These are the strongest and most expensive of the natural fibres and are normally recognizable by their coffee colour. Most rope made from these fibres is in stranded form (made from two or more separate strands of rope which are twisted together).

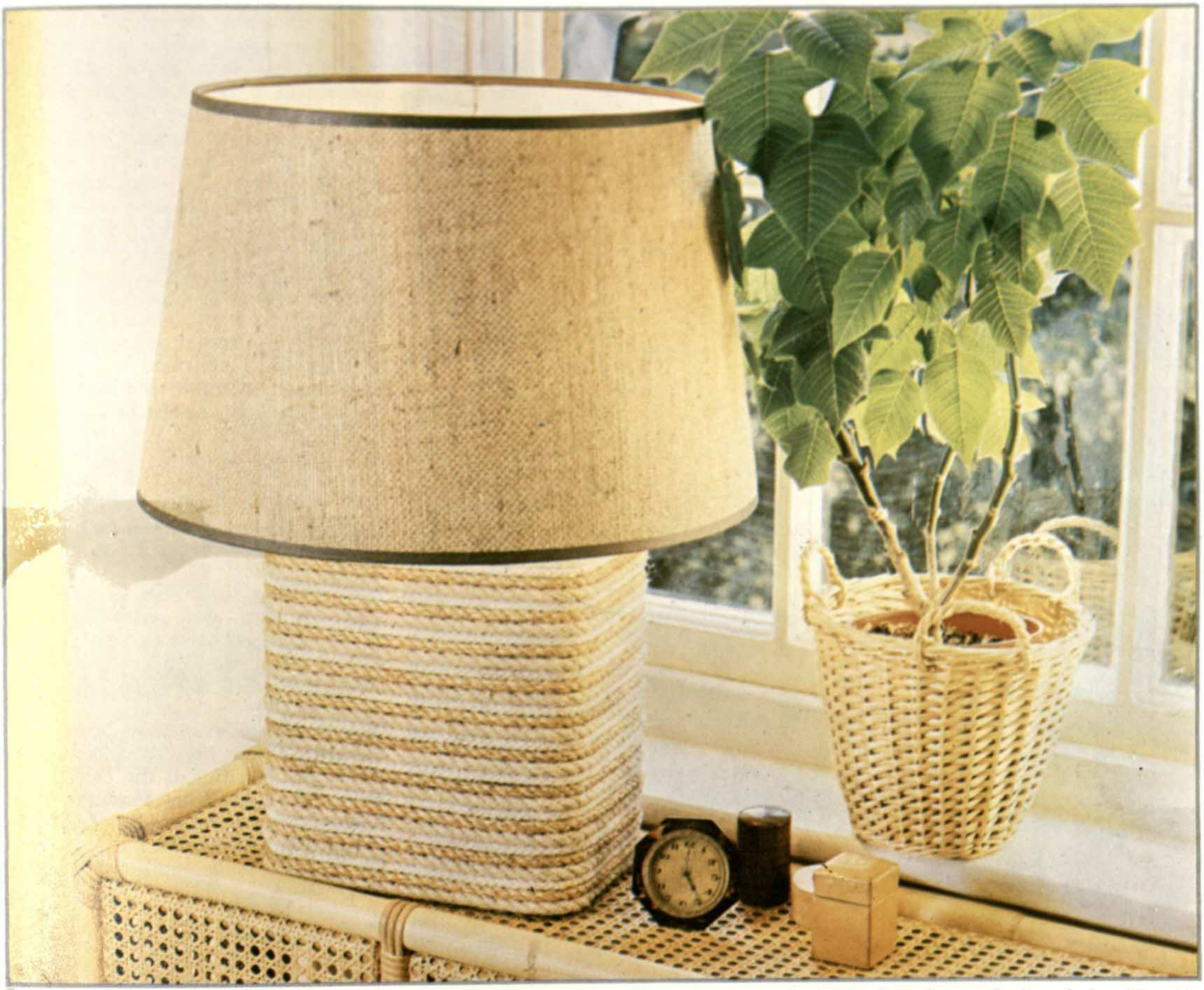
Sisal is one of the cheaper natural fibres and is recognizable by its off-white colour and hairy texture. Sisal dyes well and is sometimes available in different colours but these are more expensive.

Jute is another inexpensive natural fibre of a slightly darker colour than hemp. It is recognizable by its fine fibres and it is normally sold in braided form (like a tubular plait) rather than stranded.

Cotton is the cheapest natural fibre and is recognizable because it is off-white and smooth. It is more often sold by stationers as parcel string rather than by rope chandlers.

Polypropylene is the most expensive of the synthetic fibres and is recognizable by its shiny texture. It is available in white and other colours and is normally stranded although some

The different kinds of rope and twine, all available in a variety of weights.



Neil Lorimer

This lampbase, designed by Horatio Goni, was made from a motor oil can covered by coiling rope around it. The shade carrier is a bent coat-hanger.

thinner grades are braided.

Terylene and nylon appear very similar although nylon is more stretchy than Terylene. They are softer and smoother than most other types of rope and are available in a wide range of colours. They are normally braided rather than stranded. Nylon is also made in a fluffy version which is suitable for some forms of craft work where this texture is required.

Rope for coiling

Natural fibre ropes such as sisal, jute or hemp are normally cheapest to use for this type of project and they are available in different thicknesses from hardware shops or suppliers of camping or sailing materials. Choose a chunky rope for larger objects such as furniture or oil cans and thinner twine for small items such as a coffee jar or flower pot.

The colour. Ropes are available in a variety of natural shades ranging from off-white to brown but you can dye the lighter shades if you wish to match your colour scheme. Combining ropes of different colours is also attractive.

Attaching the rope. There is no need to glue all the rope to the surface of the item you are covering because the tightness of the coiling keeps it in position, but you do have to secure the ends of the rope to the surface. On wood this can be done simply by using a tack and burying the head inside the twist of the rope. On glass or metal you will have to glue the ends, using a general-purpose clear adhesive or a contact adhesive. You will normally achieve the best result by fraying the end of the rope for about 2.5cm-4cm (1″-1½″) and applying the adhesive to the rope and to the surface to which it is to be stuck. When the adhesive is tacky, press the rope firmly and accurately in position. Where possible the frayed ends should be covered by an adjacent coil.

It is normally easiest to work direct from the hank of rope because it is not easy to calculate exactly how much you will need. If you do run out before you have finished covering an area, glue down the end in an unnoticeable place as neatly as possible and butt the end of the new length up to it.

Oil can bases

The stylish lamp base in the photograph was made from a large motor oil can. The electrical fitting was slotted into the opening and the flex passed through the can and out from a small hole which was drilled in the side at the bottom. The lampshade sits on a home-made shade carrier, fashioned from a wire coat-hanger.

To make the base

You will need:

Average-sized oil can.

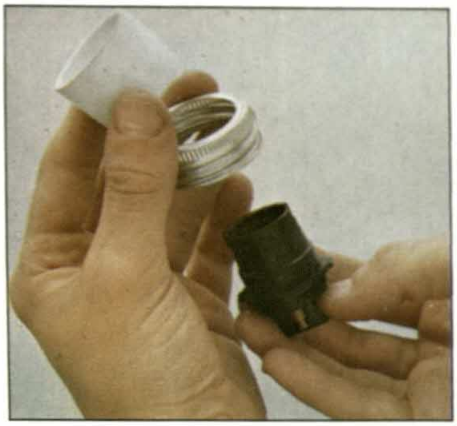
Medium-weight rope, 27m (30yd) if you are using one colour only or 9m (10yd) of each colour if you are using three colours.

General-purpose clear or contact adhesive (such as Bostik 1 or Evo-Stik).

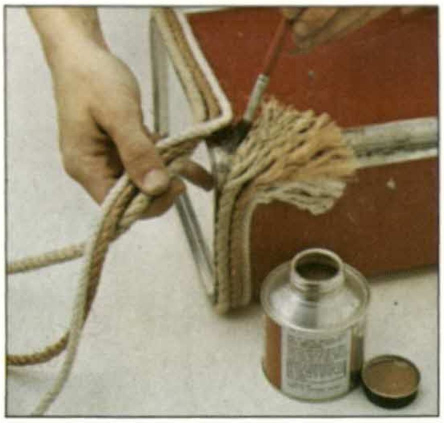
Light fitting with flex, suitable for bottles.

Drill and No.10 or 12 bit.

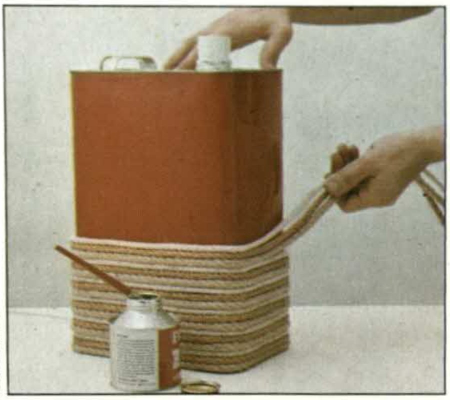
Wire coat-hanger.



1. *Inserting the light fitting.*

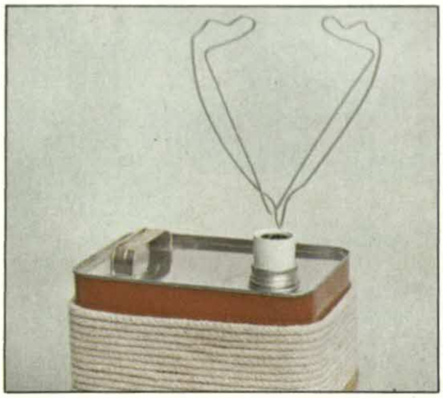


2. *Gluing the frayed ends.*



3. *Coiling the rope.*

Neil Lorimer



4. *Shade carrier made from coat-hanger.*

☐ Fill the can with water, rinse with a little detergent to remove all oil and dirt. Stand upside down to dry.

☐ Drill a small hole at the bottom near the corner on one side of the can. Thread the light flex through the can from the opening at the top and out through the hole. (Alternatively, if this is difficult, disconnect the flex from the light fitting and thread through the hole in the bottom and out at the top). Slot the light fitting into the hole at the top, or into the cap if possible (fig.1) and press down firmly.

Attaching the rope. Fray out the ends of the rope for about 2.5cm (1") and smear with adhesive. Smear adhesive at the bottom. When tacky, press the rope end (or the ends held together and parallel if you are using different colours) on to the glued area. The lower edge of the rope should be level with the bottom of the can. Hold in place until adhesion is complete. Spread more adhesive in a band round the bottom of the can (fig.2).

☐ Start winding the rope round the can, covering the ends of the rope and then spiralling up the can. Keep the windings close together and as taut as possible. If you are using three strands of rope, hold them level and parallel (fig.3).

☐ At the top, cut off any excess rope, fray the ends and smear on some adhesive. Smear some adhesive on the can at a corresponding position and stick down when tacky. Tuck the ends under neatly.

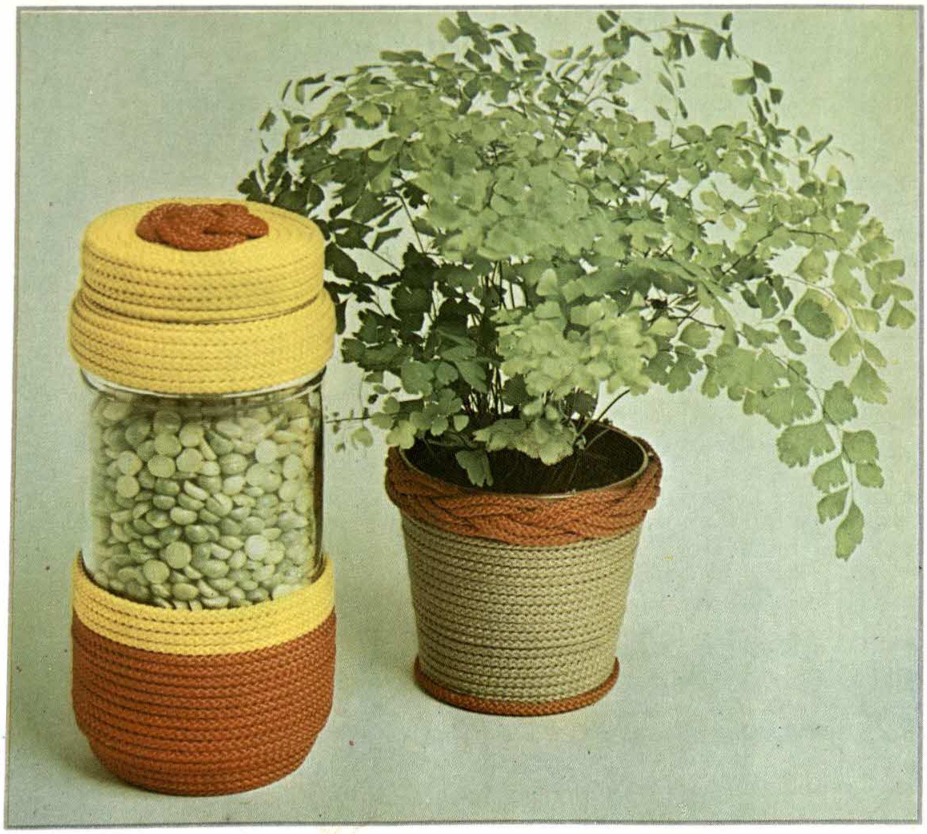
The lampholder. Bend the coat-hanger as shown (fig.4) and fit the loop round the opening of the can at the base of the light fitting. Push the lampholder towards the middle of the can so that the lampshade will be balanced. Fit the lampshade, bulb and electric plug.

Coffee jar and plant pot

All kinds of dull household items can be made more attractive by coiling. For small items you will not require a large amount of twine so it is not costly to use synthetics which are available in a good range of colours and can be washed.

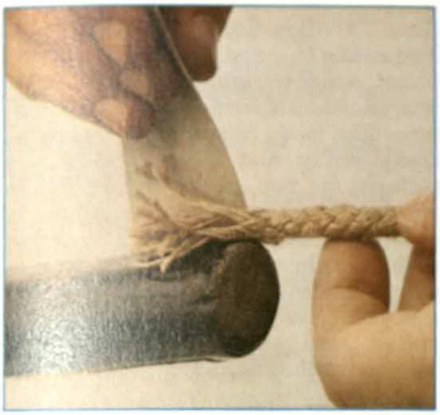
Coffee jars. When decorated with coiled twine empty coffee jars make attractive storage jars for the kitchen or work room. If you leave part of the jar uncovered you will be able to identify the contents easily. The lid of the jar can also be covered by coiling the twine from the centre outwards and then round the sides. The centre of the lid on the photograph was finished with a Turk's head knot (see Ropework chapter 1, page 1018).

The plant pot. There is no need to stand a plastic plant pot in a decorative container when you cover it with coiled twine. The rim of this one is finished with a seven-tuck, two-part Turk's head knot.

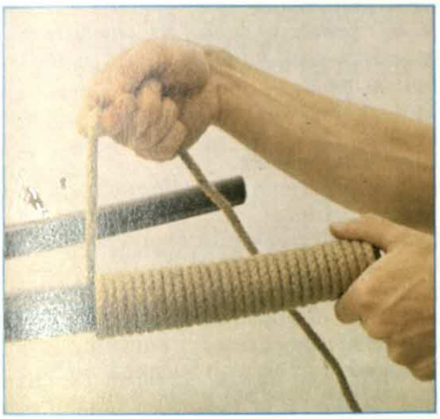


Dick Miller

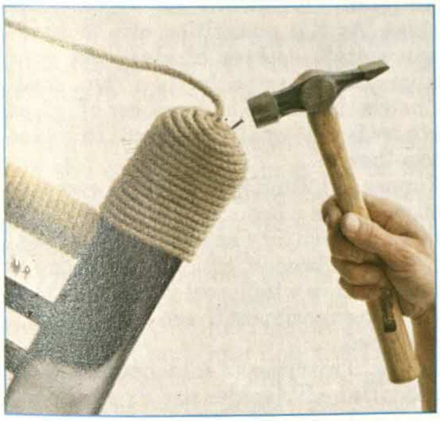
A coffee jar of the type which might normally be thrown away and a plastic plant pot are given an attractive finish with coiled twine by Ropecraft.



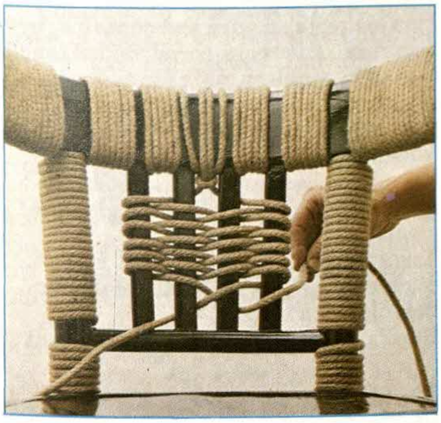
5. *Gluing rope to chair leg.*



6. *Coiling rope around leg.*



7. *Securing the end with a tack.*

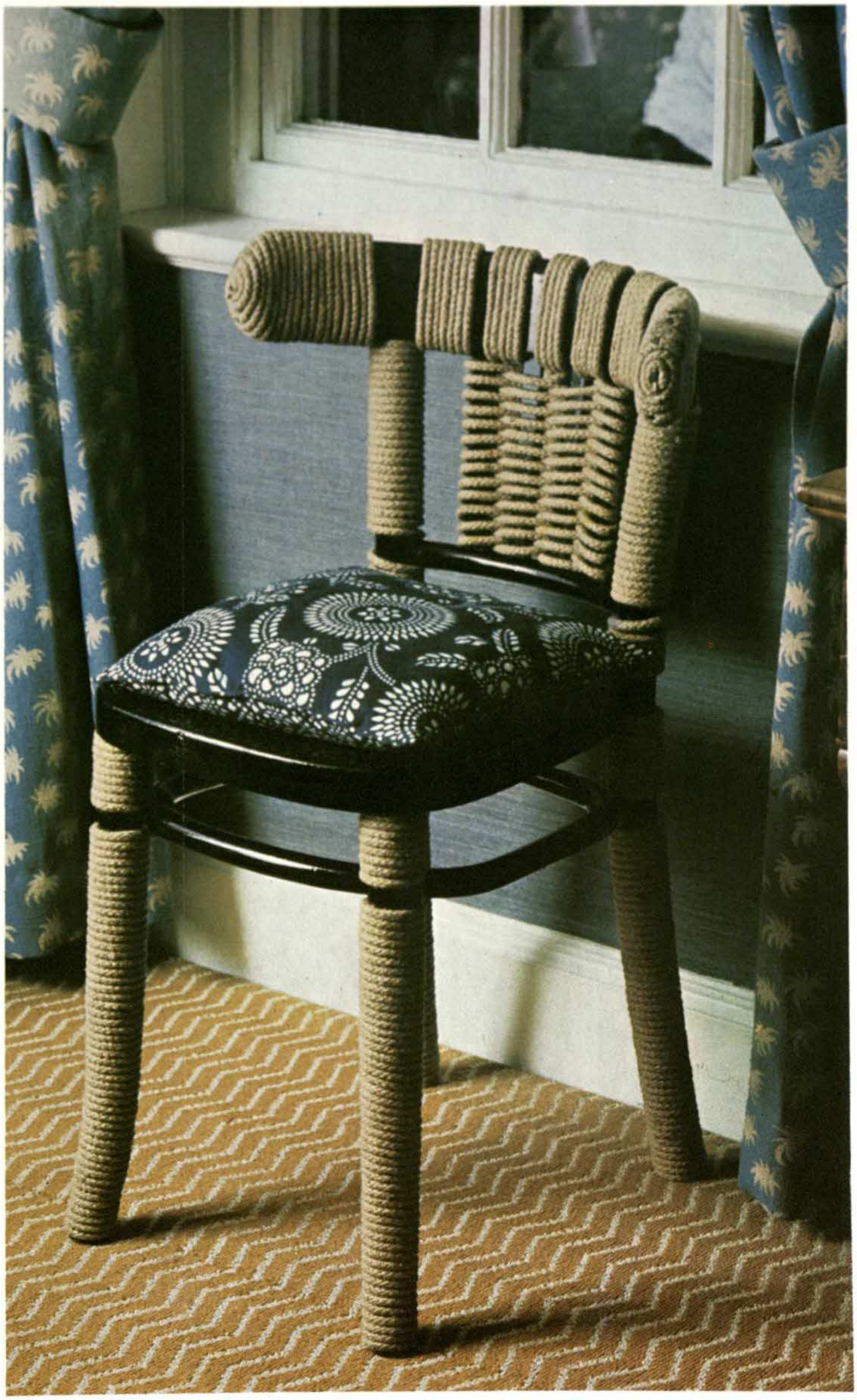


8. *Weaving round the middle struts.*

Covering chairs

The amount and the method with which you cover a chair will obviously depend on the style and size of the chair and how much of the wood you wish to cover. Study the chair before you begin work and plan your design. Decide where you could make a continuous length of rope cover a large area. On the chair in the photograph, for example, the back and back legs were covered with four separate lengths. The ends of two of the lengths were glued to the bottom of the legs (fig.5), wound up the legs (fig.6), on to the side struts and part of the back cross member where they were finished neatly with a small tack (fig.7).

The other two lengths were wound round the remaining part of the cross member and then woven round the middle struts (fig.8). Two more lengths were used to wrap round the front legs in a similar way.



Neil Lorimer

Utility chair given a new lease of life with coiled rope by Horatio Goni.

Glass and copper foil

Glass is often joined together with lead calme to make a strong and traditional window, mirror, terrarium or lampshade as shown in previous chapters. The lead, however, is comparatively bulky and heavy and is not suitable for fine work. Copper foil is another product available which is useful for making light delicate objects such as glass jewelry. The foil is wrapped around the edges of the glass and completely covered with solder, unlike lead calme which is only soldered at the cut joints.

To make a brooch

In this chapter a brooch is made using glass and copper foil techniques, but other jewelry such as necklaces, bracelets and buckles could equally well be made.

You will need:

Tools

Glass wheel cutter.

Scissors or trimming knife such as a Stanley knife.

Grozers (glazier's pliers) or ordinary blunt-ended pliers.

Soldering iron, either a 75 watt electric one, or an old-fashioned copper one requiring a gas flame for heating.

Gas cooker or bunsen burner if using an old-fashioned soldering iron.

Pencil and ruler.

Materials

Antique, Opalescent or commercial glass. As the quantities are so small any suitable pieces of glass left over from other projects can be used. Choose similar thicknesses of glass otherwise they will be difficult to solder together.

Copper foil, 6mm ($\frac{1}{4}$″) wide and about 60cm (2′) for a brooch 7.5cm x 6.25cm (3″x 2$\frac{1}{2}$″) with four or five intersections within the brooch. Since the copper foil comes in a long reel you will have room to experiment to see how much you need.

Solder. Two types of solder can be used: tinman's solder and a paste flux such as Fluxite (used in lead work) or resin-cored tin solder such as Ersin Multicore used for electrical work. This looks like a wire and contains its own flux. The resin-cored solder tends to stay in a molten state for a longer period of time without getting over-heated and is probably the best solder to use.

Panel pins, lasting nails or other suitable nails for holding the glass in place.

Asbestos mat, about 15cm (6″) square.

Wire wool or wire brush for cleaning the soldering iron.

Hardboard or smooth piece of wood at

Jerry Tubby

The finished glass brooch by Pixie Dorchy makes a stunning clasp for a cape.

least 15cm (6") square.
Felt, thick cloth or newspaper.
General-purpose adhesive such as UHU.
Thin card at least 15cm (6") square.
Sheet of paper.
Acetone or nail polish remover and cotton wool for applying it.
Two brooch pins or clasps.

☐ Design a brooch on paper; keep the lines simple and the curves gentle for ease of working.

☐ Cut out the different sections of the brooch, place them on a piece of card and draw round in pencil. Cut out the card sections to make a set of templates.

☐ Select the glass for each section of the brooch. Place the glass on felt, or thick cloth or newspaper.

☐ Arrange the templates on the glass and, with the glass cutter, cut out all the sections of the glass by following the instructions in Glass chapter 4, page 450.

☐ Use the grozers or pliers to 'bite' off any awkward edges along the glass. Hold the glass in one hand, the pliers in the other and firmly jerk away from your face. The glass should be as smooth as possible.

☐ Assemble pieces together as in original drawing. Make sure they fit comfortably together and that all the outer edges line up. Very small gaps or irregularities can be later filled with solder.

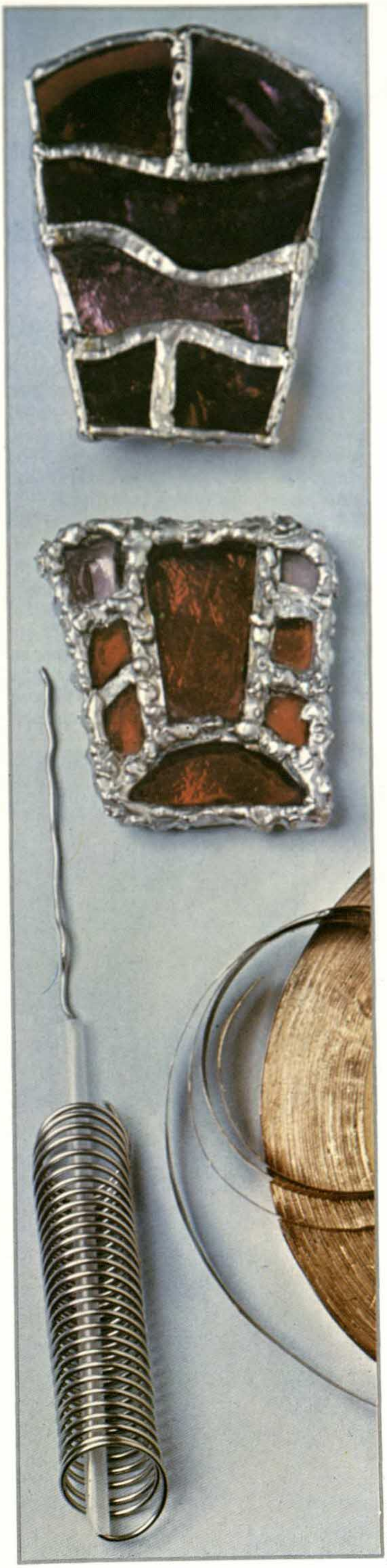
☐ Wrap foil around the edges of the glass. To do this peel off some of the protective film on the back of the copper foil.

☐ Hold a piece of glass in one hand and the end of the copper foil in the other. Move the foil up to the glass and place the glass so that the edge is in the middle of the strip of foil.

☐ Press the foil along both sides of the glass, carefully wrapping it around so that there is an equal amount of foil on both sides. Using your fingernail or the back of the scissors, buff and press the foil down as neatly as possible. Remember to tuck the corners in, rather like the ends of a parcel.

☐ Continue in this way all round the piece of glass allowing a small overlap where the foil meets. Cut off with scissors or a Stanley knife. Do not worry if the foil does not completely stick as this will be rectified in the tinning process.

☐ Pull off the foil if it seems too bumpy. Smooth it out with the back of your hand (rather like silver paper) and try again. If the stickiness has come off the back of the foil lightly apply a general-purpose adhesive to the edges of the glass before re-applying the foil.



A reel of copper foil, some solder and two brooches. As you can see, the solder on the lower brooch is lumpy. You may like this chunky effect, if not see text for how to remove lumps.

Dick Miller

☐ Wrap all the pieces of glass in this way.

☐ Arrange the wrapped pieces of glass together on a smooth piece of wood. Using a hammer place lasting nails or panel pins around the glass to hold it in place. You are now ready for tinning.

Tinning is the equivalent of soldering in lead work. The entire area of the copper foil, top, back and sides, is covered with solder.

☐ Clean the end of the soldering iron with wire wool or a wire brush. Clean the copper foil similarly.

☐ Cover the copper foil with flux if you are using tinman's solder.

☐ Heat the soldering iron and, using either type of solder, solder the joins on one side of the brooch, following the instructions in Glass chapter 7, page 798.

☐ Remove the nails and solder the joins on the other side.

☐ Draw the solder over the foil in an even, fluid line, making sure that the solder covers the entire area of the copper foil. Cover both sides of the foil using pliers to turn the glass over as it can get very hot.

☐ You may find it useful when tinning the edges of the brooch to hammer two nails close together into the wood, slip the brooch between the nails end on, and tin all the way round, turning the brooch when necessary.

Tinning requires a little practice and a deft hand so do not despair if your first efforts seem a little lumpy. If lumps of solder do appear re-apply the iron without further solder and lift off very quickly and gently.

Resin-cored solder tends to coat the glass with a plastic film but this can be removed by cleaning the glass with cotton wool soaked in acetone or nail polish remover.

Beading. When every piece of copper foil is tinned the brooch is ready to be beaded with a second coat of tinning.

The beading is the final, soldered surface which gives a smooth, slightly rounded finish to the top of the tinning. The bead is laid down drop by connecting drop, each bead flowing into the next in a continuous line. When you come to an intersection add another drop of solder to bridge the gap. Be careful not to drag the soldering iron through the beads as this will mar the line.

If you feel that a piece of beading is particularly bad re-work in the opposite direction, using very little solder.

☐ Bead the back and all the edges.

The fastening. Solder two brooch pins or clasps on to the soldered back of the brooch. Space them apart so the brooch will balance when it is pinned on to material.

Inkle weaving on a loom

Yarn — weaving 15

Although the origin of the word is unknown, an inkle is a coloured linen tape or braid rather like the braids produced in tablet weaving. Like tablet weaving, inkle weaving is restricted to narrow widths but weaving on a loom is much quicker and easier.

If you enjoy creating braids it may be worth buying an inkle loom. Although the pattern variations are not quite so numerous as in tablet weaving, inkle weaving on an inkle loom is an immensely satisfying type of weaving.

Samples and braids in this chapter were all made on an inkle loom and they show some of the basic patterns that can be achieved.

Inkle fabric

Inkle bands are extremely strong and hardwearing. They can be used for such things as belts, ties, bag-handles, head bands and guitar straps.

If the strips are joined together with a flat stitch they make attractive articles including floor rugs, bags, cushions, ponchos, chair seats and stool covers. Inkle strips, of course, make excellent trimmings and are very useful for joining narrow strips of weaving.

Warp faced. Like braids woven by tablet weaving, inkles are usually warp faced ie the warp is dominant, unlike tapestry where the weft is dominant. The warp threads are packed together so tightly that the weft does not show and to make an inkle the warp has to be held under a tension that is variable and controllable. This is because there is a great warp 'take up' and the tension has to be adjusted during weaving. To speed up the weaving process, there must also be some way of separating the two sheds.

The inkle loom

Because of all these requirements, a loom has evolved specifically for inkle weaving. Although inkles can be woven on more complicated looms, the inkle loom itself is very cheap and can be home-made. However, the construction must be very sturdy because there is great tension in the stretched warp.

There are at least two ready-made models on the market (figs.1 and 2). The peg or flap T is important because it allows you to adjust the tension of the warp as the fabric is produced.

Materials

It is advisable for beginners to start with a strong, smooth thread such as mercerized cotton in bright colours. Once experience has been gained, a variety of yarns can be used including wool (woollen or worsted), silk, linen, rayon and nylon. In fact experiments can be made with new materials as you discover them or even as they are invented. Strong, textured threads and metallic threads can be introduced effectively. (See Weaving chapter 5, page 374 for details about yarns.)

As in tablet weaving avoid using soft, hairy materials in the warp for they tend to cling together and make weaving difficult and tedious.

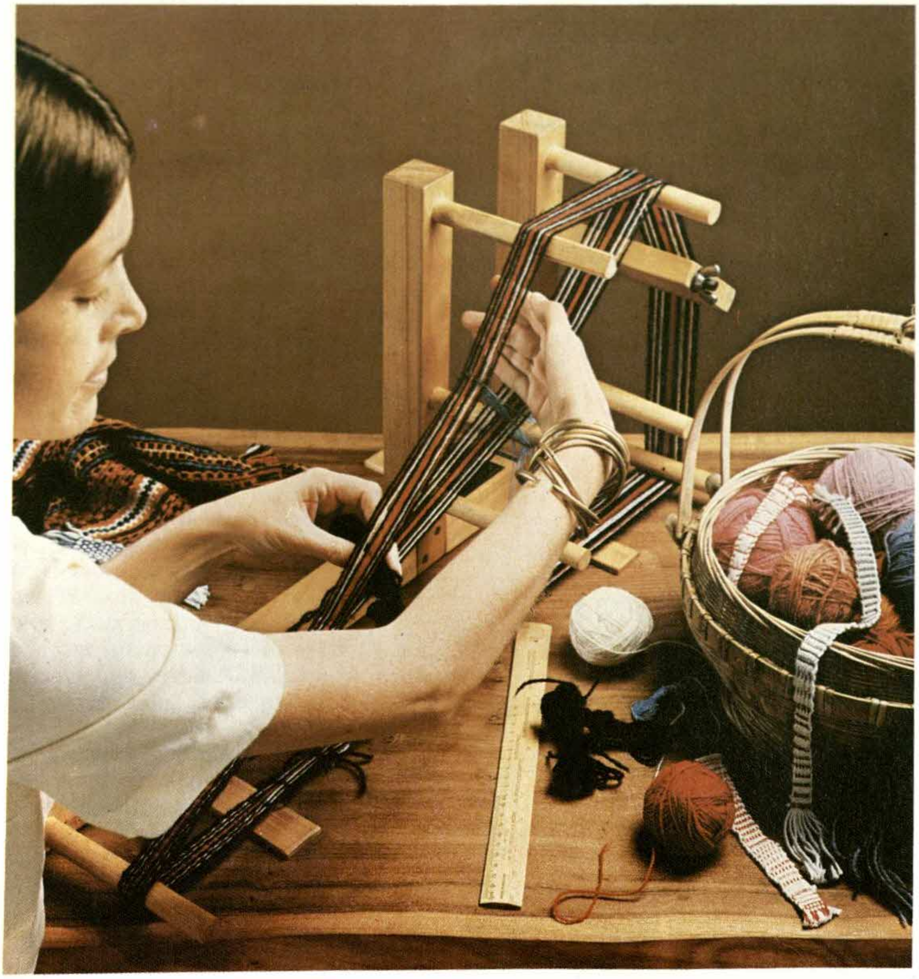
If mixing types of threads in the warp first test their elasticity and try to work with threads which will keep an even tension unless a 'seersucker' effect is required.

Winding the warp

The warp is wound straight on to the loom. One thread is taken straight round the pegs (1, 2, 3 in fig.1 and 1, 2, 3, 4 in fig.2). The adjacent thread has to go through a string or cotton leash and over the notched peg (X in figs.1 and 2). If the loom does not have leashes attached to the peg they can be made as required by cutting equal lengths of about 20cm (8") and tying them around peg S. Make a small loop at the end and they can become a permanent fixture on your loom. Make sure that your leashes are equal or your shed will not be clear.

Warp threads that go straight around the pegs are called 'open' and can be raised or lowered by hand to create the two sheds needed for weaving.

Length of warp. The length of the warp can be adjusted on the bigger model (fig.2) by altering the position



Alan Duns

Weaving a braid on the table model. Shed 1 is being made by pushing down on all the 'open' threads.

of pegs 3 and 4. This will give the warp threads a longer or a shorter journey. On the smaller model (fig.1) there are two extra pegs (5 and 6) to extend the length of the warp.

Remember to add at least 30cm (12") to the length of the strip required when calculating the length of the warp because it is not possible to weave right to the end of the warp and you lose length in the take up. The beginning and end of the warp cannot be woven. It takes about 2.5cm (1") at the beginning to settle the width of the braid and the end cannot be woven because the leashes get in the way.

Width of warp. In inkle weaving the weft is pulled tightly and the warp threads are consequently drawn in. This will reduce the width of the braid to about half of that originally shown when the warp is wound on. Do not worry about the sett of the warp as in this particular form of weaving the weft pulls the warp into a close position automatically.

The width of the weaving is determined by the thickness of the warp threads so that ten coarse threads will give a wider fabric than ten fine threads.

Putting on the warp. Attach the end of the first thread to peg 1 making a knot which can be untied easily.

☐ Wind the threads according to the colour scheme changing colours at peg 1 by tying the new colour to the old one securely. Thread one thread right around the loom and the next one through a leash and so on until all the threads are on—with every other one through a leash.

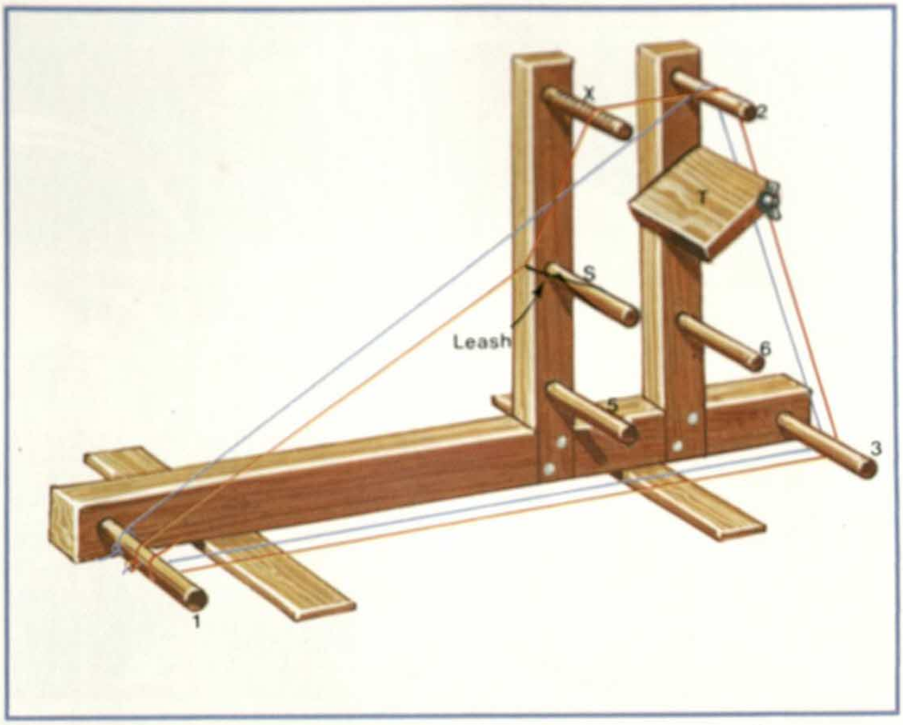
☐ After all the threads have been warped, cut the last warp end about 15cm (6") beyond peg 1.

☐ Undo the knot securing thread 1 and tie the thread to the last thread. With very wide inkles it would be advisable to tie thread 1 to thread 4 or 5 and the last thread to one which is about 4 or 5 threads in from that end. This prevents the warp from being distorted.

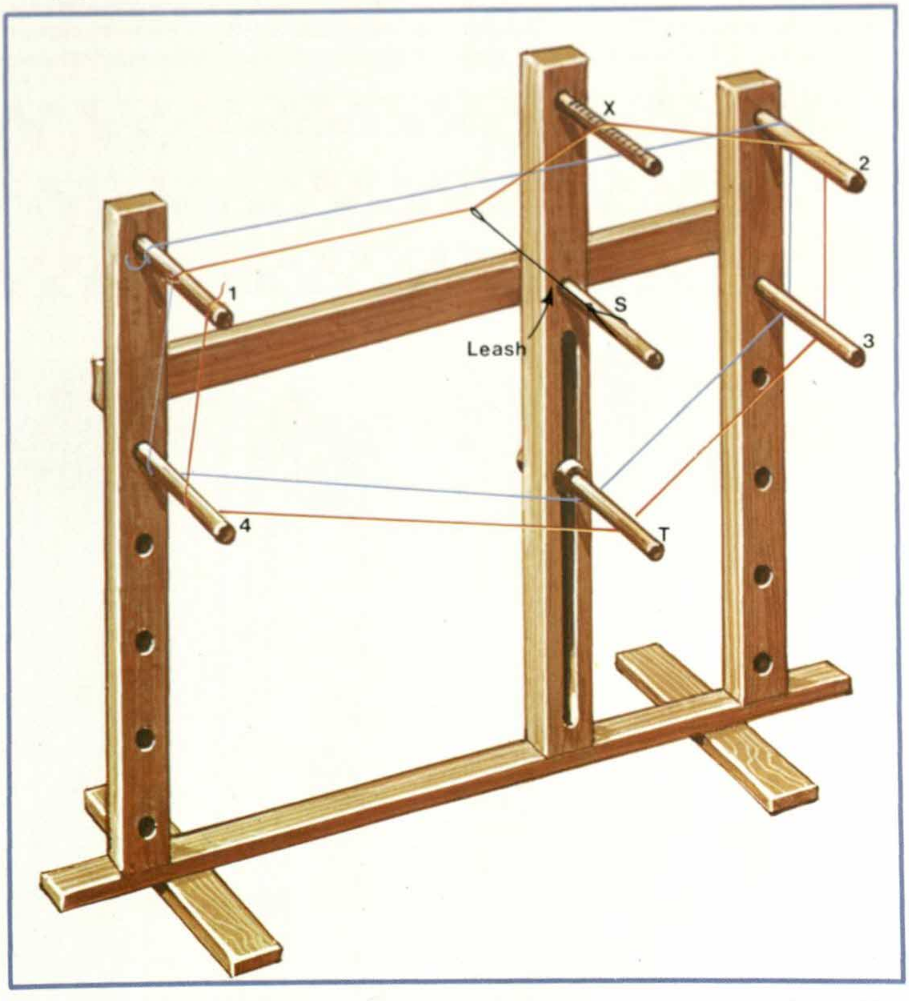
☐ As the whole warp is going to travel around the pegs during weaving in a kind of unrolling motion, it must not be anchored to any of the pegs.

Even tension. The warp threads must be of an even tension. If the last part of the warp is tighter than the first part, the weaving itself will be crooked. Adjust the tension by working the slack around until the warp is even.

Short-cuts. There are various ways of putting on the warp and after a little practice you will devise your own short-cuts. For instance, if winding a warp with alternate colour threads, you do not need to cut the yarn each time but simply take the two threads and wind them around together putting one colour through the leash and the other right around the loom.

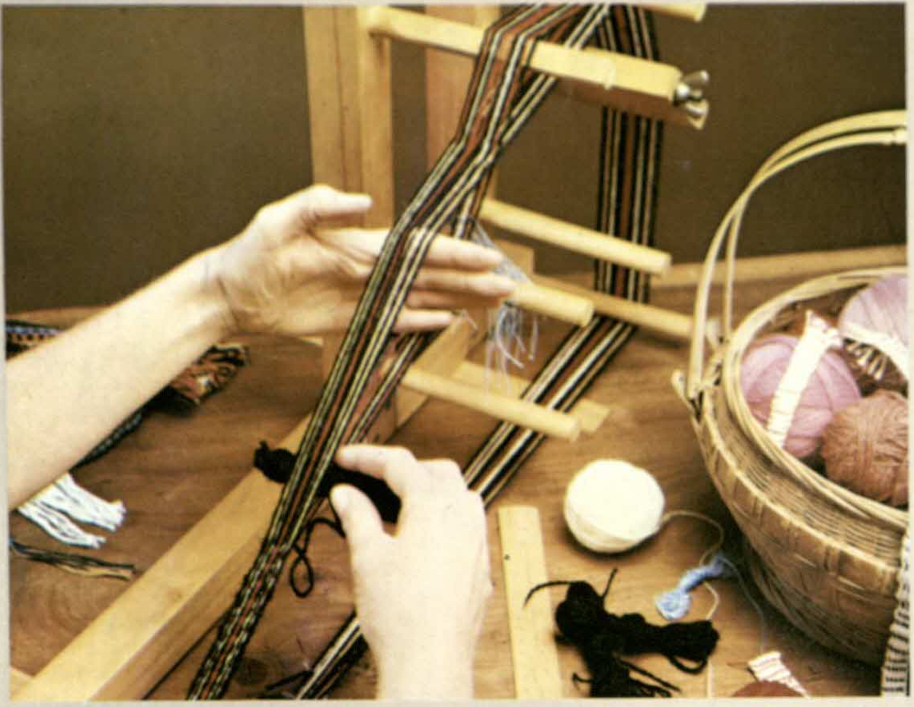


1. *The table top inkle loom. Every other warp thread goes through a leash and over peg X. The other 'open' threads go straight around pegs 1, 2 and 3.*



Trevor Lawrence

2. *Longer braids can be woven on the floor model inkle loom by altering the position of pegs 3 and 4 to make a longer warp.*



Making shed 2 by lifting up all the 'open' threads. (Making shed I is shown on page 1356.)

Weaving

The width of the material is controlled by the weft and the density of the fabric is determined by the way in which the weft is beaten. As inkle fabrics are warp faced the weft should pull the warp threads closely together. In order to do this, and to get a good firm selvedge it is advisable to weave one pick, change shed and then pull the weft thread tightly before weaving the second pick.

To weave on an inkle loom you may like to use a small stick shuttle. Alternatively, wind your yarn into a lozenge shape (see Weaving chapter 7, page 600) and use a thin stick such as a ruler for beating down.

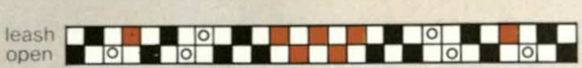
Changing sheds. To make the two sheds you simply lift or press down on the open threads as shown in the photographs. As they move you create the two sheds—one with the open

The braids

All the braids shown are easy to weave on an inkle loom. They show combinations of basic braid designs and give some ideas for colour schemes. If you would like to make up any of the braids, simply follow the relevant pattern draft and notes on weaving materials.

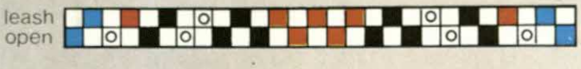
Tension of weft. By altering the tension of the weft you can change the width of your braid. Pulling the weft tightly will narrow the braid and a

A



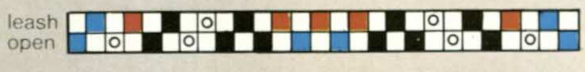
A simple braid of lines and stripes woven in 2-ply worsted wool.

B

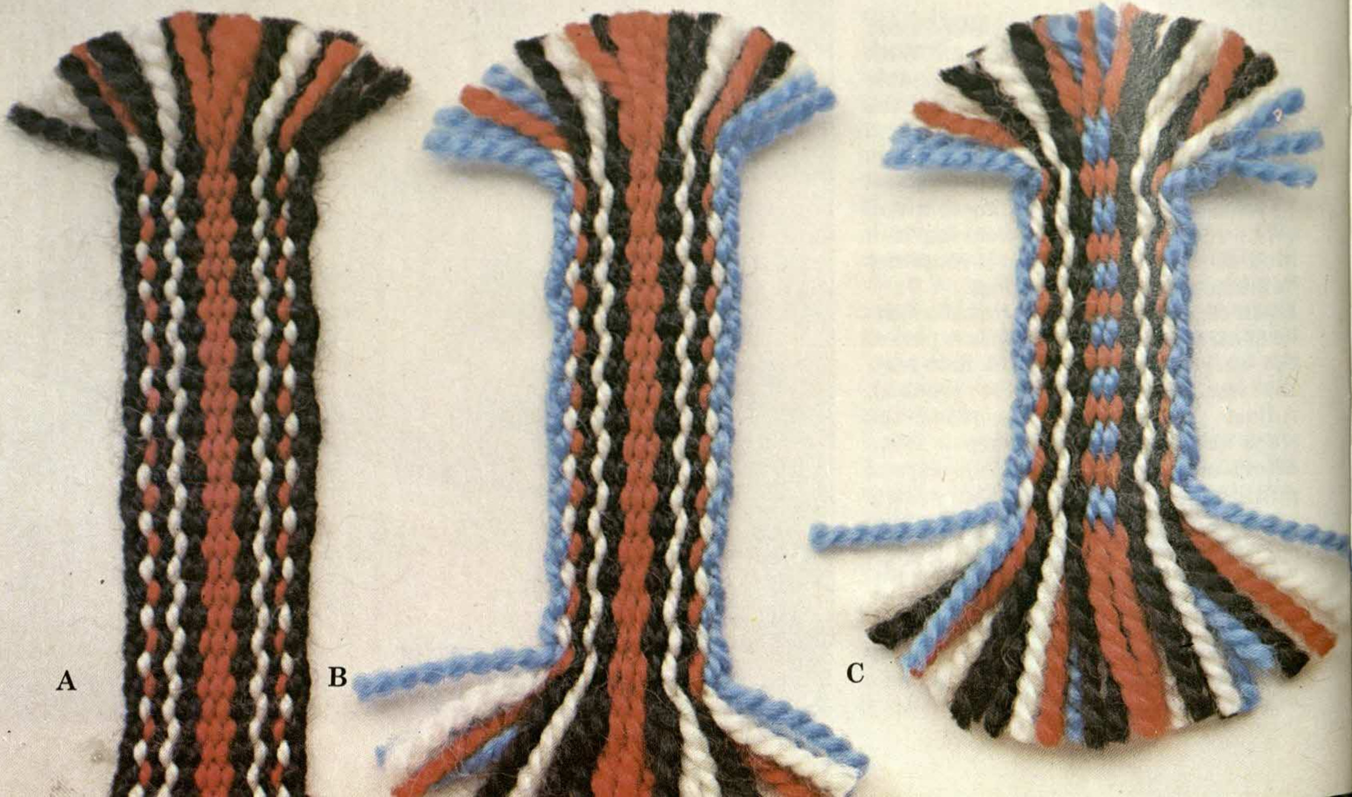


The same braid with the selvedge and weft in blue.

C



Two blue threads substituted for two red ones to make alternate bars.



Alan Duns/Braids designed by Hetty Wickens

threads above, one with them below.

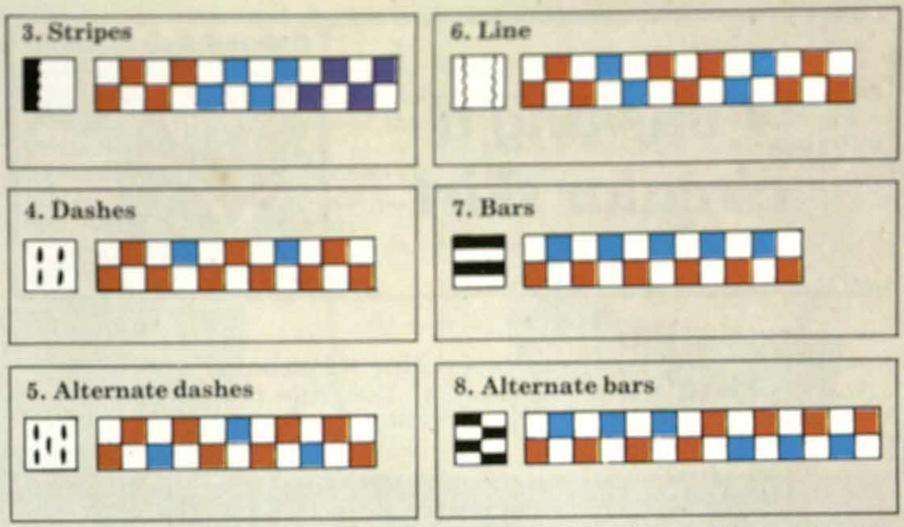
When weaving, it is useful to get into a rhythm. You will develop your own method of working but one useful way is to push the open threads down with the right hand when weaving from left to right and lifting the open threads with the left hand when weaving from right to left. As you weave, pull the whole warp around the loom until you get back to the beginning again.

Reading a draft

The basic pattern charts are shown in figs.3 to 8 and the braids featured show how you can combine even the most basic pattern structures to create interesting effects.

The charts should be read from left to right because the loom is threaded in this direction. Only the threads which are needed to show the basic pattern unit are on the chart. To make a wider band, repeat the pattern unit across.

The lower line shows the threads which go straight round the loom or the 'open' threads. The upper line shows the threads which must be taken through the leashes. The chart also shows you the ultimate form that the design will take as your braid will be a constant repeat of the pattern in the chart. When the odd numbered threads are pushed down, the even numbers will show on the surface of the cloth and vice versa. The whole of the design is created by the warp threads.


3. Stripes

4. Dashes

5. Alternate dashes

6. Line

7. Bars

8. Alternate bars

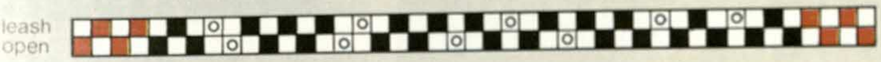
3-8. *The basic design elements. Top line in each represents leash threads and bottom line the open threads.*

Paul Williams

slackened weft will produce a fan shape.

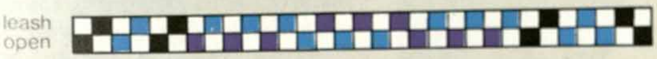
Finishing off. On an inkle, there is a large number of warp ends, so it is necessary to think of ways of making the weft secure. The usual overhand knot would probably be too bulky in most cases. However, it is possible to plait the fringes, wrap them or twist them. The samples have a weft darned in leaving a fringe. For other ideas see Weaving chapters 13 and 14, pages 1144 and 1172.

D



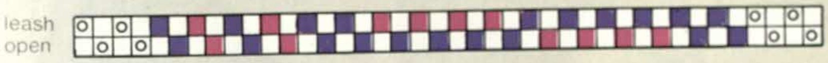
Braid using dashes, alternate dashes and lines in 2-ply wool.

E&F

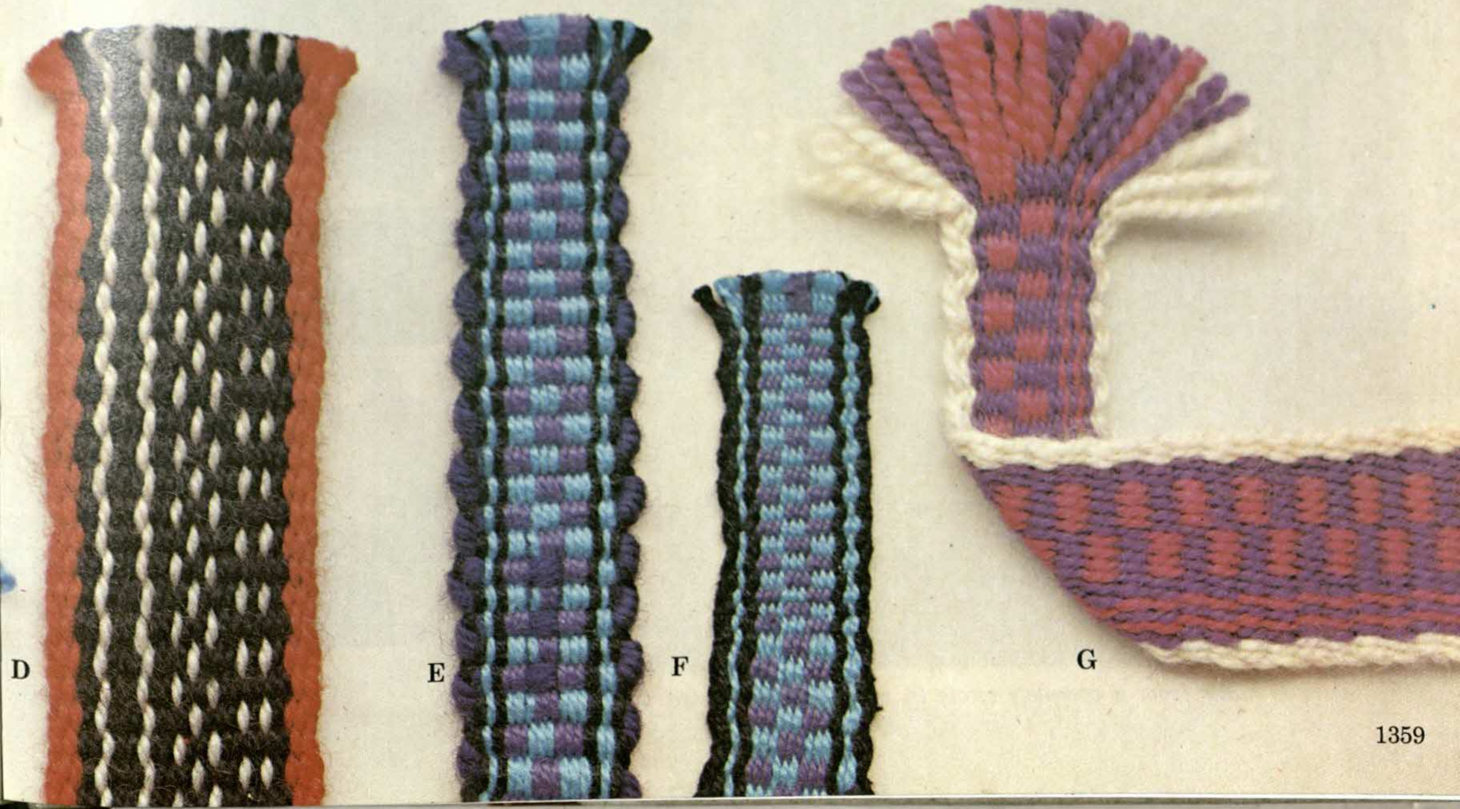


Same warp, different weft. Design is made up of alternate bars and lines.

G



Braid of bars and lines with the last few rows of weft pulled in tightly.



Finishing a circular skirt

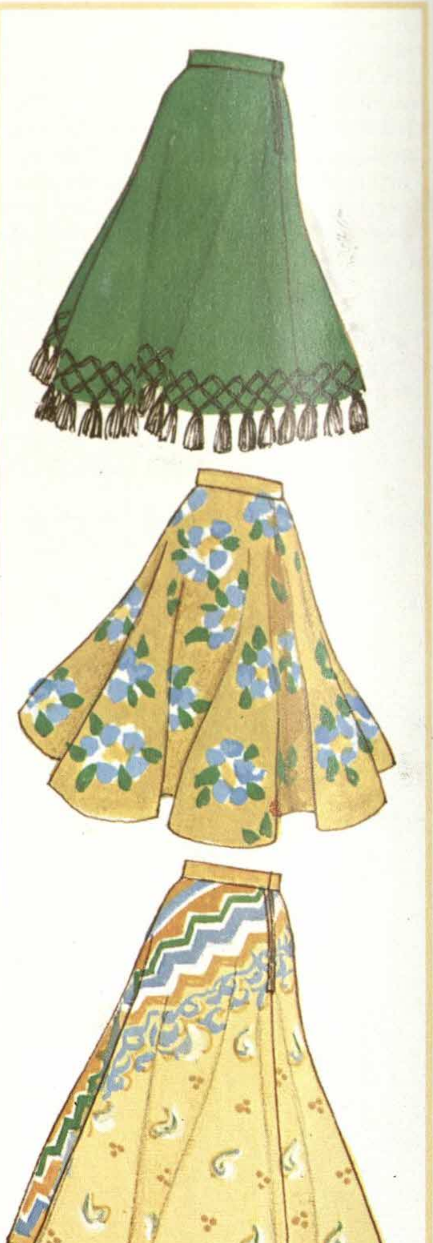
Cloth — sewing 13

How to cut out a skirt from a circle is covered in Sewing chapter 12, page 1332. Here are the instructions to finish the skirt at waist and hem.

Zip, waistband and hem

☐ Neaten the raw edges of the seams with a zigzag stitch or by hand.
☐ Tack and stitch the zip into the centre back or side seam by hand.
☐ Attach the waistband.
☐ Again hang the skirt from the waist for a few days to allow the fabric to drop. All fabric cut on the cross grain will drop a little.
☐ Even up the hemline, neaten the raw edge with a zigzag stitch or by hand.
☐ Turn up a 1.5cm ($\frac{1}{2}''$) hem and pin. Tack into place distributing any fullness evenly. Blind stitch the hem.

A short half-circle skirt with fringing, short full-circle skirt in cotton and mid-calf length half-circle skirt.



Jerry Tubby

This skirt is made from a complete circle in wool jersey trimmed with braid.

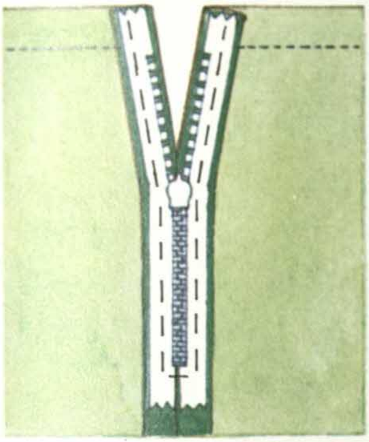
Zips

Stitch zips in by hand. Always put your zip into a skirt before stitching the waistband to the skirt. In this way the top ends of the zip are neatly hidden inside the waistband.

☐ Tack zip into place. Straight, even tacking stitches make a good guide line as final stitching is worked from the right side of the garment (fig.a).

☐ Start stitching from bottom at centre seam, working with tiny even half back stitches (fig.b).

a



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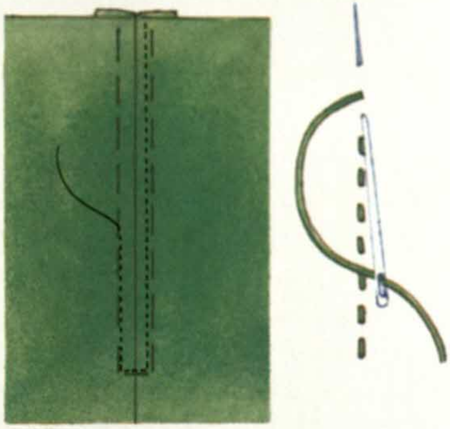
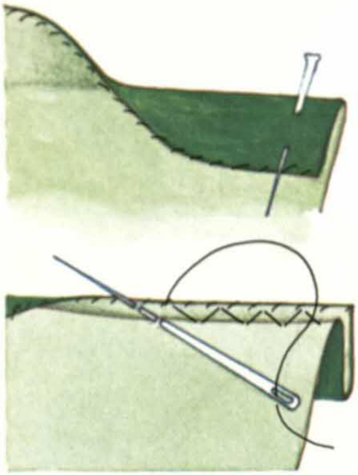


Hem

Stitch hem with blind stitch. Pick up a single thread from skirt and a small stitch from hem diagonally above.



Waistband

☐ Cut a strip of fabric for the waistband 6cm (2″) longer than your waist measurement, **7.5cm (3″) wide.**

☐ Tack 2.5cm (1″) wide interfacing to wrong side of waistband (fig.a) with one edge to the centre. Trim off seam allowance at each end of interfacing.

☐ Mark centre front of waistband with pin, allowing for an extension of 4.5cm ($1\frac{1}{2}$″) at one end (fig.b).

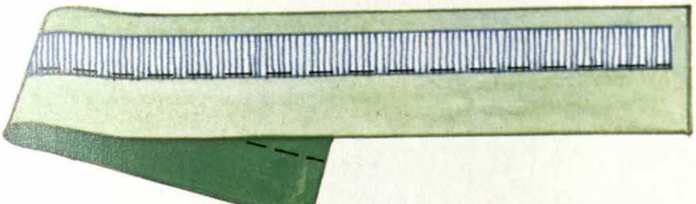
☐ With right sides of fabric together, pin waistband to skirt matching centre fronts, allowing for 4.5cm ($1\frac{1}{2}$″) extension one end and 1.5cm ($\frac{1}{2}$″) turning at the other, stitch (fig.c).

☐ Fold waistband right sides together and stitch ends. Trim seam allowance at ends, trimming corners diagonally (fig.d).

☐ Turn waistband right side out and then slip stitch by hand for a neat finish inside, turning in all raw edges (fig.e).

☐ Stitch on hooks and eyes.

a



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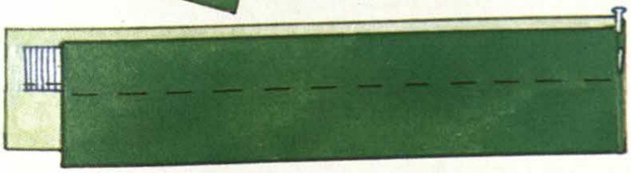

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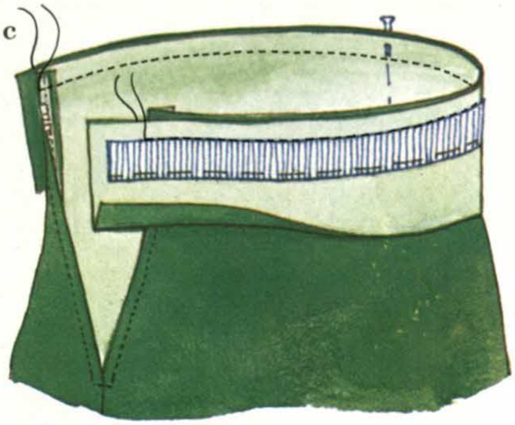

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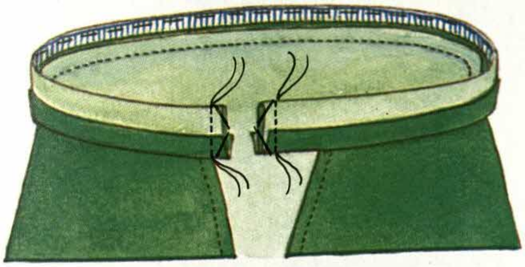

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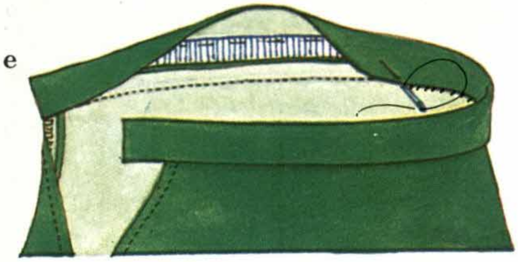


Barbara Firth

Tie belt skirt

The waistband of this half-circle skirt is 5cm (2″) deep. It has a 7.5cm (3″) wide tie belt placed over the waistband and either half tied or knotted at the front.

You will need:

2.80m (3yd) of 90cm (36″) wide fabric for the complete skirt, that is 95cm (1yd) more fabric than required for the short half-circle skirt.

5cm (2″) wide fine interfacing the length of waist plus 6cm (2″).

Matching thread, 4 hooks and eyes.

Cutting out

☐ Fold the fabric in half as shown and mark out the skirt with the string and

Tony Kent/100 Ideas de Marie Claire

chalk method as described in Sewing chapter 12, page 1335. Cut out.

☐ Cut the waistband 13cm (5") wide by waist measurement plus 6cm (2"). This can be cut on the fold to obtain the correct length.

☐ Cut the tie belt on the cross grain of the fabric 18cm (7") wide as indicated on the cutting layout, and from double fabric. Cut across the fold and shape the opposite pointed end by cutting on the straight grain in both directions.

Making the skirt

☐ Make up the skirt as for 'short half circle skirt', Sewing chapter 12.

☐ Insert the zip and make the waistband as shown on page 1361.

☐ Topstitch the waistband across the ends and along the top close to edge.

☐ Sew four hooks and eyes on to the waistband to fasten.

Making the tie belt

☐ Place the two tie pieces flat on the table with right sides up and the diagonally cut ends overlapping and cut one piece along dotted line (Sewing chapter 6, page 403).

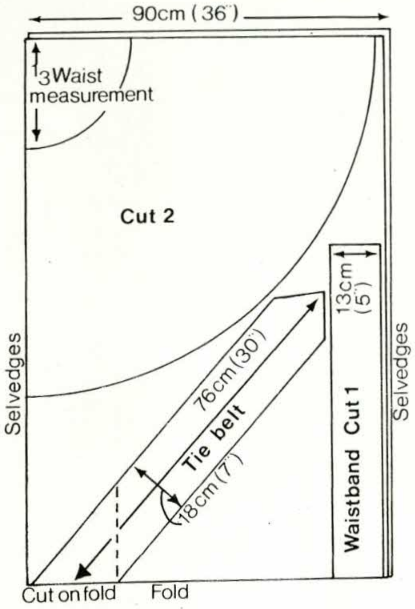
☐ With right sides together tack and stitch these ends together taking 1.5cm (½") turnings. Press open.

☐ Fold tie belt in half lengthways, right sides together. Taking 1.5cm (½") turnings, tack and stitch the short ends and long edge leaving an opening to turn through. Trim corners, turn to right side and press. Slip stitch the opening.

☐ Topstitch close to the edge all round the tie belt.

☐ Allow the skirt to hang for 24 hours and turn up the hem (see page 1361).

☐ Put on the skirt and tie the belt over the waistband at the front in a knot or half knot.

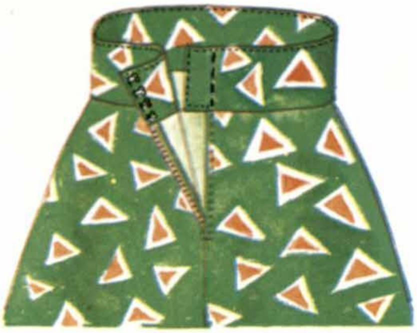


Trevor Lawrence

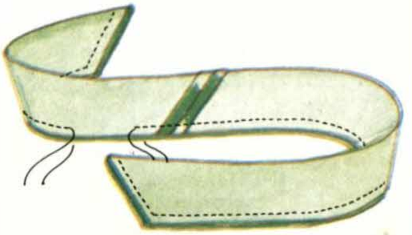
Cutting layout for half-circle skirt with deep waistband and tie belt.

Left: is another variation of the half-circle skirt. The seams are placed at the sides, the waistband is made deeper and topstitched. A loose tie belt is then tied in a knot or looped around the waist.

Waistband and belt

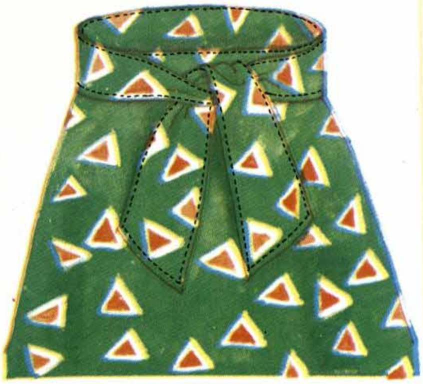


Skirt made up with the seams at the sides. The zip stitched into place and the deeper, topstitched waistband attached and fastened with four hooks and eyes on the left.



Two sections of tie belt are stitched together, then the belt folded with right sides together and stitched.

Tie belt turned through, the opening slip stitched and topstitching worked all around close to the edge.



The tie belt is placed over the waistband and the ends either half tied at the front or tied in a knot.

Barbara Firth

Decorating polystyrene beads

Plastics 17

Expanded polystyrene is a thermoplastic material which means that it softens when heated and hardens when cooled. It is light, comparatively strong and durable, has an open, granular structure and can be easily cut or carved.

Polystyrene can be worked in a number of ways although a sharp knife or a hot wire are the most adaptable tools to use. Almost any texture or finish can be created. It is soluble in some solvents, such as acetone, and this property can be used creatively to achieve various finishes.

Polystyrene comes in balls, sheets, tiles (often used for insulating ceilings) or blocks. In thin sheet form it is inexpensive and easily available from wallpaper shops and builders' merchants. Since it is strong and lightweight it is used for packaging, particularly electronic goods, and much useful material can be salvaged in this way and re-cycled.

In this and the next few chapters various ways of cutting, carving and finishing polystyrene are discussed and in this chapter polystyrene balls are decorated and made into necklaces. They could equally well be made into other jewelry, Christmas decorations, or dolls' heads. Children enjoy working with this material as it is simple and easy to manage and the results are always effective (whether they work out as intended or not!).

Useful tools for polystyrene

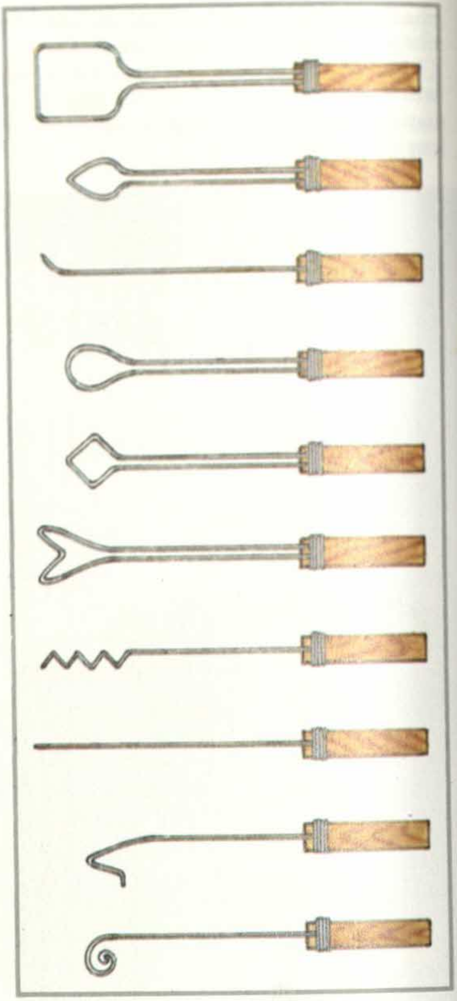
Scalpel or one-edged safety razor, eg Swann-Morton scalpel. (A trimming knife such as a Stanley knife will do but it is not so good because the blade is short.) Use for cutting tiles and sheets of polystyrene.

Ordinary saw for cutting large blocks.

Files, rasps, metal planes, wire brushes and coarse grade glasspaper for shaping blocks.

Hot-wire cutter. This works by an electrical current passing through a nickel-chrome wire (fig.1). The heat produced cuts the polystyrene. A small, battery-operated type is available; ask at shops which stock polystyrene tiles.

Heat engraving or carving tools. An electric soldering iron such as a Wella gun supplied with a variety of wire engraving attachments can be used, or you can make your own heat engravers.



2. *Polystyrene engraving tools made out of wire bent into different shapes and bound on to wooden handles. When heated, the bent wire will engrave marks on to the polystyrene beads.*

To make engravers

You will need:

Packing case wire or stub wire from a florist.

Fine-nosed pliers.

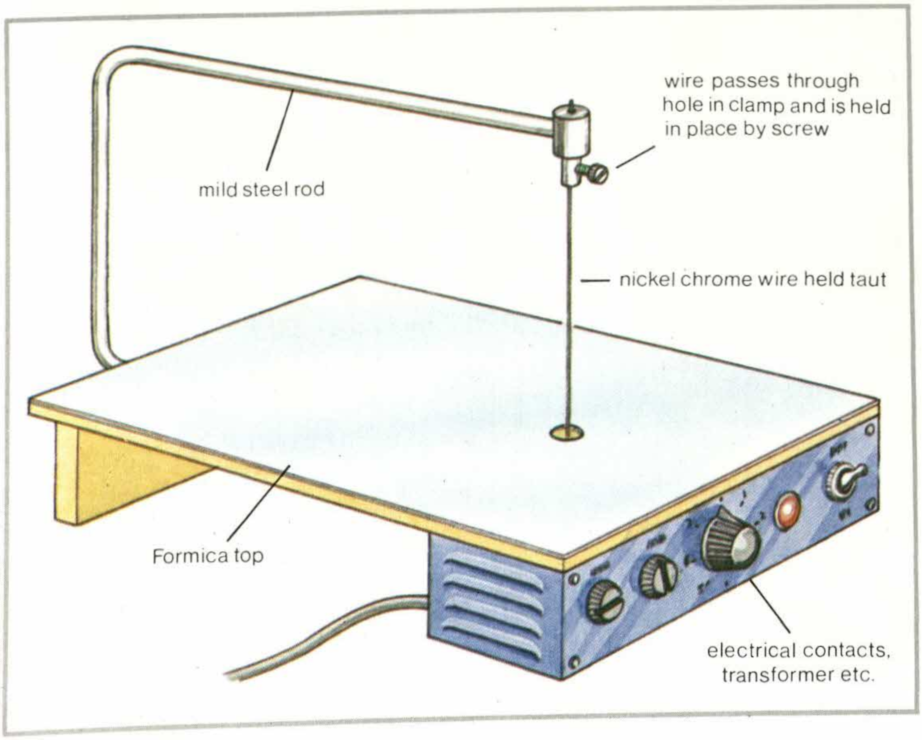
Wooden handles, or use similar shaped pieces of wood.

Fine binding wire.

☐ Bend thicker wire to desired shape with the fine-nosed pliers, then bind the wire to the handle with binding wire. Make a number of engraving tools of various shapes (fig.2).

When heated the engraving tool melts the polystyrene where it touches. If you make two identical tools you can continue working with one while the other is heating up.

For detailed work use a hot needle in a cork or held by a clothes peg; it only needs a candle to heat it up.


wire passes through hole in clamp and is held in place by screw
mild steel rod
nickel chrome wire held taut
Formica top
electrical contacts, transformer etc.

1. *The hot-wire cutter is for cutting out shapes from polystyrene. The polystyrene is placed on the Formica surface and guided into the heated wire which slices through the polystyrene.*

Paul Williams

To make decorated beads

The instructions below explain how to make holes in polystyrene balls and then engrave, paint, dye, or give metallic finishes to them.

You will need:

Quantity of high-density polystyrene balls. Buy any size you like up to 2.5cm (1") in diameter and sufficient number for a necklace.
Heat engraving tool (a straight wire) for making hole through centre of ball.
Another length of wire at least 15cm (6") long.
Engraving tool(s); these are optional for engraving the surface of the bead.
Gas cooker or bunsen burner for engraving tools.
Paintbrushes for applying paint and/or dye.
Orange stick or toothpick.
Soft cloth for polishing.
Button thread for threading beads together.
Decorative braid or thread (optional).
Cotton thread.

Decorative finishes:

Paints; these must be water-based, such as poster paints, emulsion paints or gouache colours if they are not to dissolve the surface of the beads.
White or cream emulsion paint.
Water-based dyes such as Dylon dyes, or water-based inks or food colouring.
PVA adhesive such as Evo-Stik; this is mixed with the dye to give a translucent glaze.
PVA varnish such as Vinilac to coat the surface of painted beads.
Gold or copper powder.
Wax such as furniture polish or tan shoe polish for use with the gold and copper powder.
Talcum powder for use with the wax.
Sequins.
Dressmaker's pins.

To make a hole. You need to make a hole through the centre of each ball in order to be able to thread it.

☐ Heat up the straight wire tool over a burner of a gas cooker or in the flame of a bunsen burner. When it is red-hot remove it and, holding a ball in the other hand, push the wire straight through the centre of the ball.

☐ Remove the wire, lay the ball to one side, heat up the wire again and continue in this way until all the balls are pierced through the centre to make beads. The beads can be coloured and finished in a number of ways: engraved, painted, dyed or given a metallic or sequin finish.

Engraving. Work on one bead at a time.

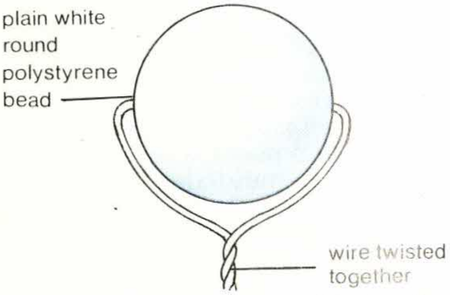
Some of the paints, dyes, and braids used for making decorated polystyrene beads together with a collection of different sized beads as they look before decoration.

Alan Duns

Geoffrey Frosh

Decorated beads can be threaded on to gold thread to make a necklace.

☐ Take a length of straight wire, push it through the hole in the bead (fig.3) and twist round to form a handle.



3. *Polystyrene bead secured in handle.*

This will hold the bead steady while you are working on it.

☐ Heat up the engraving tool you have chosen to engrave the bead and, when it is hot, remove and lightly press on the bead. The surface of the bead will melt at the point of contact. It continues melting slightly after the wire has been removed and this will give a soft edge to the design.

☐ Engrave as many beads in this way as you wish. Paint or dye them afterwards.

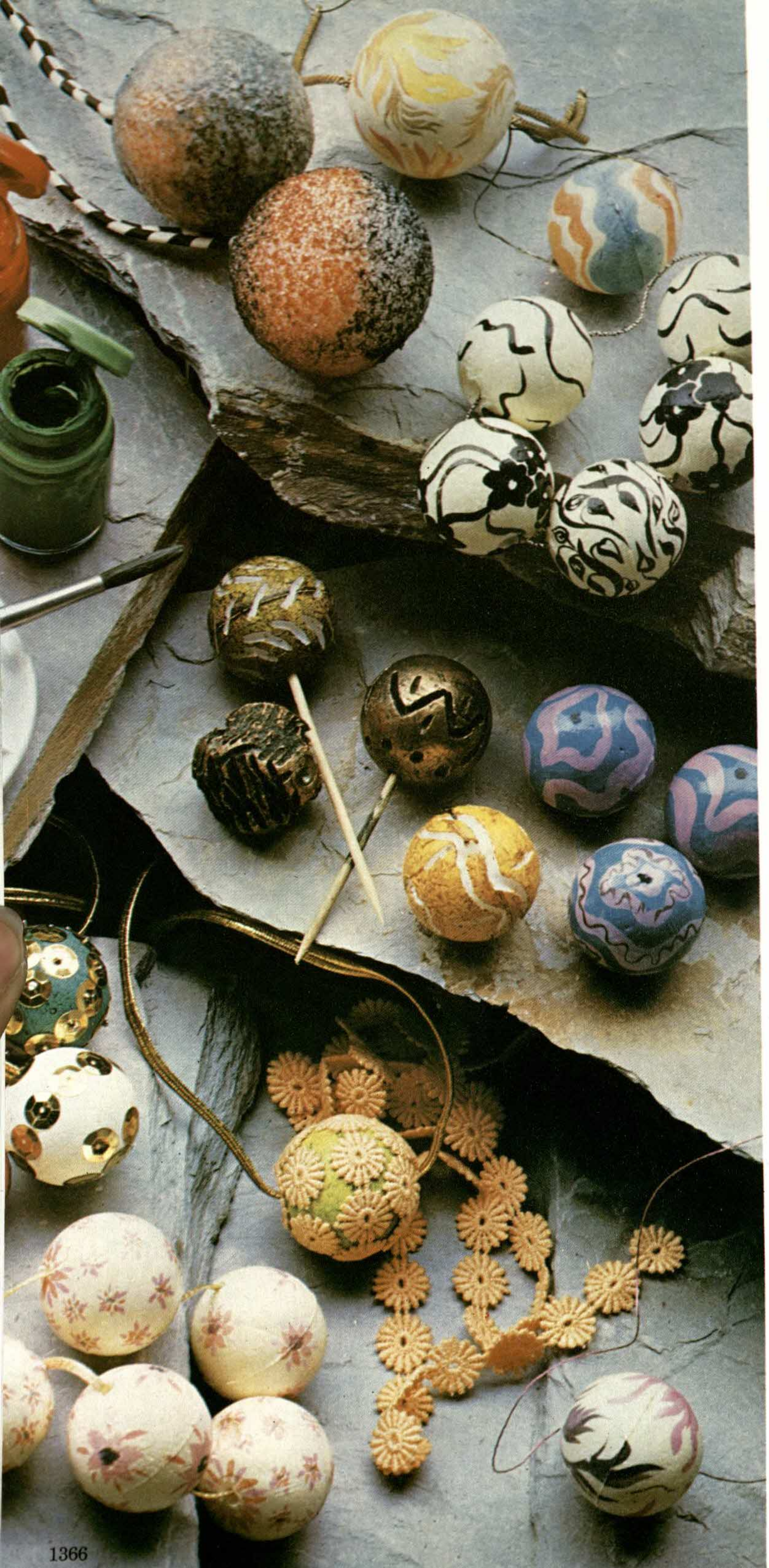
Painting. Support the bead on an orange stick or on a toothpick while painting.

☐ Prick the bead with a pin to make design lines for the painting.

☐ Mix up the paints to the consistency of single cream and apply two coats of pale emulsion to the bead, before finishing off with the final coat of paint of your choice.

☐ Finish by varnishing. Push an orange stick or toothpick into the hole in the bead, stick the other end into a scrap of polystyrene and varnish. Alternatively, glaze the bead by using a little PVA adhesive mixed with water.

Dyeing. First seal the beads by painting them with a thin coat of emulsion.



Alan Duns

A collection of finished beads showing the variety of different effects that can be achieved.

☐ Mix up a small quantity of PVA adhesive with a little water to thin it.
☐ Mix a little dye with the adhesive until you get the right shade (which will be darker than the finished result).
☐ Prick a design on bead as before.
☐ 'Paint' the bead with dye. The PVA adhesive will give a good glaze to the bead.

If you wish to dye the beads all over mix up enough dye to drop the beads in; then take out after a few minutes. Another alternative is to mix in inks or food colouring with the adhesive, instead of a dye.

Metallic finish. Engraved beads can look most attractive if they are painted first with a dark coloured paint such as dark green and then given a metallic finish.
☐ Dip a soft cloth into wax such as shoe polish and, using only a tiny amount, dip again into gold or copper powder.
☐ Buff across the raised surface of the beads.
☐ Leave for two days for the wax to harden.
☐ Dust the gold beads with a little talcum powder mixed with a little gold powder. Polish the beads with a soft cloth. The wax and the powder will act as a polishing agent. Again, only use very small quantities.

Sequins can be attached to a bead by a dressmaker's pin after dyeing or painting. Alternatively, stick each sequin to the bead with a dab of PVA adhesive, using a pin to keep the sequin in place until the adhesive sets.

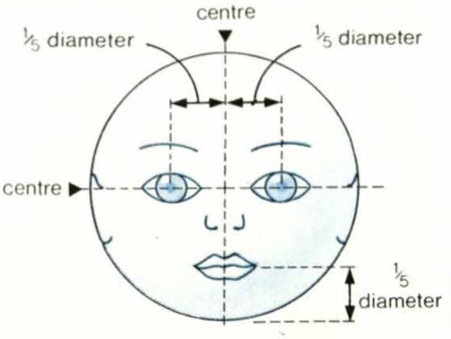
When all the beads have been decorated thread them together with button thread to make a necklace, bracelet, or use a single bead for a belt end.

Dolls' heads

Polystyrene balls can be painted to make dolls' heads. These can be used to make up the characters for a dolls' theatre, as heads for costume dolls, or as puppets' heads.

You will need:
Materials and tools as for painted beads; wool for hair.
☐ Decide on type of face to be painted and make working drawing—see fig.4 for proportions.
☐ Supporting ball on orange stick paint with an appropriate colour emulsion base coat.
☐ Mark out features very lightly with a pencil on to the ball.
☐ Using poster paints in appropriate colours, paint on features.
☐ If hair is to be painted on, do this now. Leave to dry.
☐ If you are using wool for hair, choose colour and style and stick on using PVA adhesive. The body, clothes, ribbons, jewelry etc can now be added.

Warning: polystyrene is an inflammable material and should be kept away from naked flames.

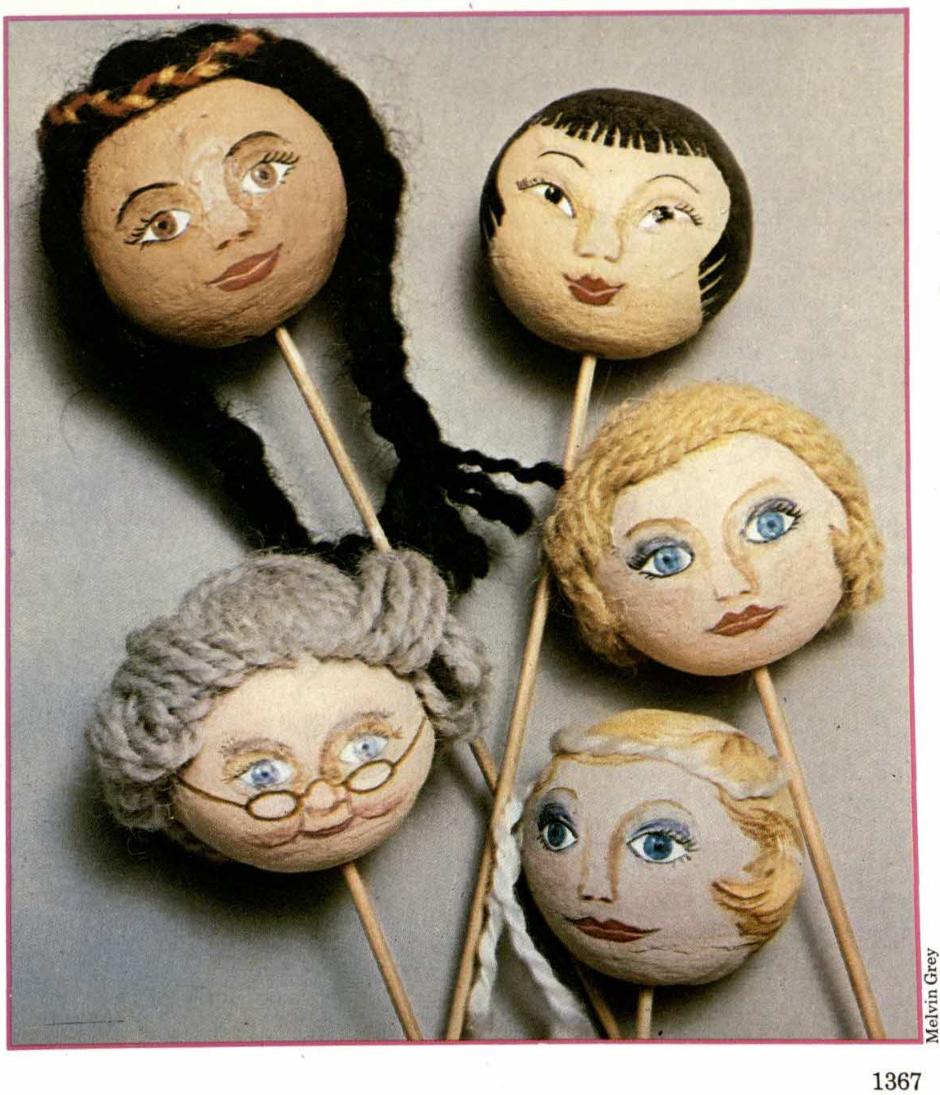


Paul Williams

4. *The proportions of a doll's face.*

Jerry Tubby

A doll's head given a cone-shaped body with arms, fabrics and trimmings stuck on. Costume designed by Stacy Carr.



Melvin Grey

Some dolls' heads as yet without bodies. The hair on the eskimo and flapper was painted on, the others have hair made of wool. Dolls' heads designed by Jeanette Durrant.

More delicious sweets to make

Edible arts 5

Here is a further selection of professional-looking and mouthwateringly delicious sweets that can be made at home—for your own enjoyment or for gifts to friends.

Orange or lemon jellies have a tangy, fresh flavour and are simple to make. Small children should not, of course, be allowed anywhere near the stove or hot pans, but older children should enjoy making these lovely jellies with

Melvin Grey

a little adult supervision.

The other recipes given here are a little more complicated and you may need some help with the nougat and marshmallow mixtures.

Before making any of these sweets, read the notes on sugar boiling, special equipment and ingredients given in the previous chapter (Edible arts chapter 4, page 1336). And do remember that, because of the high temperatures involved, sugar-boiled sweet making is definitely unsuitable for children.

Marshmallows

These soft cushion-like sweets are traditionally pink or white. It is best to use one colouring and one flavour only per batch, but there is no reason why your marshmallows should not be flavoured with peppermint and coloured green—or any other original taste and colour scheme you wish! This recipe, like nougat, really calls for an electric whisk or a helping hand.

You will need:

25gm (1oz) cornflour.
25gm (1oz) icing sugar.
450gm (1 lb) sugar.
300ml (11fl oz) water.
1 tablespoon liquid glucose.
25gm (1oz) gelatine powder.
50ml (2fl oz) orange flower water.
2 egg whites.
4 drops pink food colouring (or any colour of your choice).
½ teaspoon vanilla essence (or flavouring of your choice).

☐ Sift the cornflour and icing sugar together to make a coating mixture.

☐ Lightly oil 23cm (9″) square sandwich tin and dust well with some of the coating mixture.

☐ Place the sugar and 200ml (7fl oz) water in a heavy pan and stir over very low heat until sugar has completely dissolved.

☐ Add glucose. Increase heat and bring to the boil, without stirring.

☐ Boil steadily to 126°C (260°F).

☐ Meanwhile dissolve the gelatine in remaining water and orange flower water.

☐ Whisk egg whites until standing in stiff peaks.

☐ Blend the prepared syrup into the gelatine mixture.

☐ Then pour the combined mixture gradually into the egg whites, whisking all the time.

☐ Continue whisking until the mixture is a thick, white, opaque mass which holds its shape.

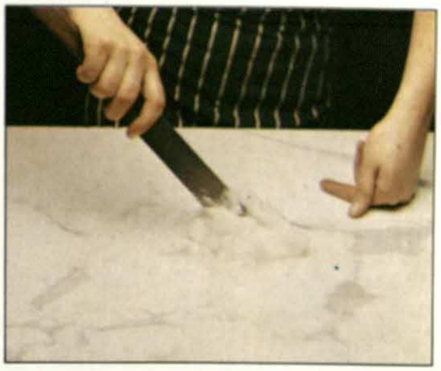
☐ Then quickly whisk in colouring and flavouring and turn into the sandwich tin.

☐ Leave to set for several hours before loosening the edges and turning out on to greaseproof paper sprinkled with half the remaining coating mixture.

☐ After 1 hour, cut into squares or rounds and toss in more coating mixture. Then pack into an air-tight container.

Pistachio nuts, hundreds and thousands and mimosa balls make attractive decorations which will enhance your delicious home-made confectionery. Packed carefully into pretty and air-tight containers, marshmallows and fondants would make original presents to give to your friends for a special treat or on a special occasion.

1. *The consistency of fondant syrup can be tested by dropping a teaspoon of it into a saucer of cold water.*



2. *Start working the cooled fondant with a sugar scraper or spatula until it turns white and opaque.*

3. *Knead the fondant thoroughly with your hands in order to make it completely smooth and pliable.*

Iain Reid

4. *Evenly knead one colouring into half the fondant, cut into shapes, then colour and cut the remaining fondant.*

Decorated fondants

Stored in an air-tight tin these attractive and easily made sweets will keep for up to two weeks. Delicious to eat with after-dinner coffee.

You will need:

450gm (1 lb) sugar.
200ml (7fl oz) water.
⅛ teaspoon cream of tartar.
½ teaspoon peppermint, vanilla, almond, orange or lemon essence.
2-4 drops food colouring of your choice.
Decoration such as sugared violets, roses, or mimosa balls, or nuts such as almonds or walnuts.

☐ Measure the sugar and water into a large heavy-gauge pan. Stir over very low heat until the sugar is completely dissolved.

☐ Then increase the heat and bring the mixture to the boil, without stirring.

☐ Sprinkle on the cream of tartar and continue boiling, without stirring, until the sugar thermometer reads 114°C-115°C (238°F-240°F) or the mixture is of soft ball consistency (fig.1).

☐ Remove the pan from the heat and stir in the flavouring.

☐ Pour the fondant on to a cold, hard working surface which has been sprinkled with a little cold water. Do not scrape out any fondant which remains in the bottom of the pan.

☐ Sprinkle the surface of the fondant with a few drops of cold water and leave to cool for three minutes.

☐ Work the fondant with a spatula, bringing the mixture into the centre from the edges (fig.2).

☐ When the fondant goes white and opaque, knead it with your hands until smooth (fig.3).

☐ Divide the fondant in half. Sprinkle 2 drops of food colouring on one half and knead until evenly coloured (fig.4).

☐ Flatten the mixture into a large disc shape and cut into shapes with small fondant cutters.

☐ Thoroughly wash the food colouring from your hands. Leave the rest of the mixture white or blend in 2 drops of another food colouring, then cut into shapes as before.

☐ After 1 hour, decorate the fondants with sugared flowers or nuts to complement the colourings and flavours.

Rubber sweet moulds for shaping jellies.

Orange or lemon jellies

These are very simple to make and taste fresh and fruity.

You will need:

150ml (5fl oz) freshly squeezed lemon or orange juice (if orange is used, include a teaspoon or two of lemon juice for tang).
125ml (4fl oz) glycerine.
25gm (1oz) gelatine powder.
Castor sugar.

☐ Place the first three ingredients in the top of a double saucepan.

☐ Heat very gently until dissolved, stirring occasionally.

☐ Strain into a jug and then pour on to a plate, or into a sandwich tin or shaped sweet moulds.

☐ Allow to set for several hours, then cut into cubes with oiled scissors or ease out of the moulds.

☐ Roll the fruit jellies in plenty of castor sugar.

☐ Store in an air-tight container in a cool place, and eat fairly soon.

Almond brittle lollipops

Attractively shaped and nicely textured, these lollipops are a treat to suck or chew.

You will need:

225gm (8oz) sugar.
2 well rounded tablespoons golden syrup.
75ml (3fl oz) water.
1 teaspoon liquid glucose.
15gm (¼oz) butter.
50-100gm (2-4oz) chopped almonds.
¼ teaspoon lemon essence.
1 teaspoon bicarbonate of soda.

☐ Measure sugar, syrup, water and glucose into a heavy-gauge saucepan, and heat gently, stirring occasionally until the sugar has completely dissolved.

☐ Increase heat and bring to the boil without stirring. Boil to 148°C (300°F).

☐ Add butter and almonds and boil again until nuts just begin to brown.

☐ Remove pan from heat and sprinkle in the essence and bicarbonate of soda.

☐ Stir well allowing the mixture to foam up in the pan.

☐ Arrange wooden meat skewers on an oiled slab.

☐ Using a soup spoon, spoon the mixture over the blunt ends of the skewers.

☐ When cold and set firm, ease the lollipops off the slab, wrap and store in an air-tight container.

Barley sugar walking sticks

These are decorative looking and very popular sweets, particularly enjoyed by children.

You will need:

6 cubes of lump sugar.
Half a lemon.
200ml (7fl oz) water.
450gm (1 lb) sugar.
1-2 drops yellow food colouring.

☐ Rub sugar cubes on the lemon to absorb full flavour of the zest.

☐ Place cubes, water and sugar in a large, heavy-gauge pan and stir over gentle heat until sugar is completely dissolved.

☐ Increase heat and bring to the boil, without stirring. Boil to 132°C (270°F).

☐ Remove pan from heat, stir in colouring, let stand for a few minutes, then pour mixture on to an oiled slab.

☐ When slightly cooled, cut into long strips with an oiled knife.

☐ Use oiled hands to twist and curve the mixture into walking stick shapes.

☐ Allow to become quite cold before wrapping and storing.

Turkish delight

This eastern sweetmeat is now as popular in other countries as in its country of origin.

You will need:

25gm (1oz) gelatine powder.
275ml (10fl oz) water.
1 teaspoon rose water.
450gm (1lb) sugar.
A few drops of vanilla or peppermint essence.
A few drops of cochineal or edible green colouring.
25gm (1oz) chopped nuts.
25gm (1oz) icing sugar.
25gm (1oz) cornflour.

☐ Lightly grease an 18-20cm (7″-8″) square sandwich tin.

☐ Place gelatine powder, water, rosewater and sugar in a saucepan. Heat gently, stirring all the time, until the gelatine and sugar are completely dissolved.

☐ Increase the heat and bring to the boil, without stirring.

☐ Immediately reduce heat and leave to simmer for 20-25 minutes.

☐ Remove the pan from the heat. Stir in flavouring and colouring and leave to cool for 5 minutes.

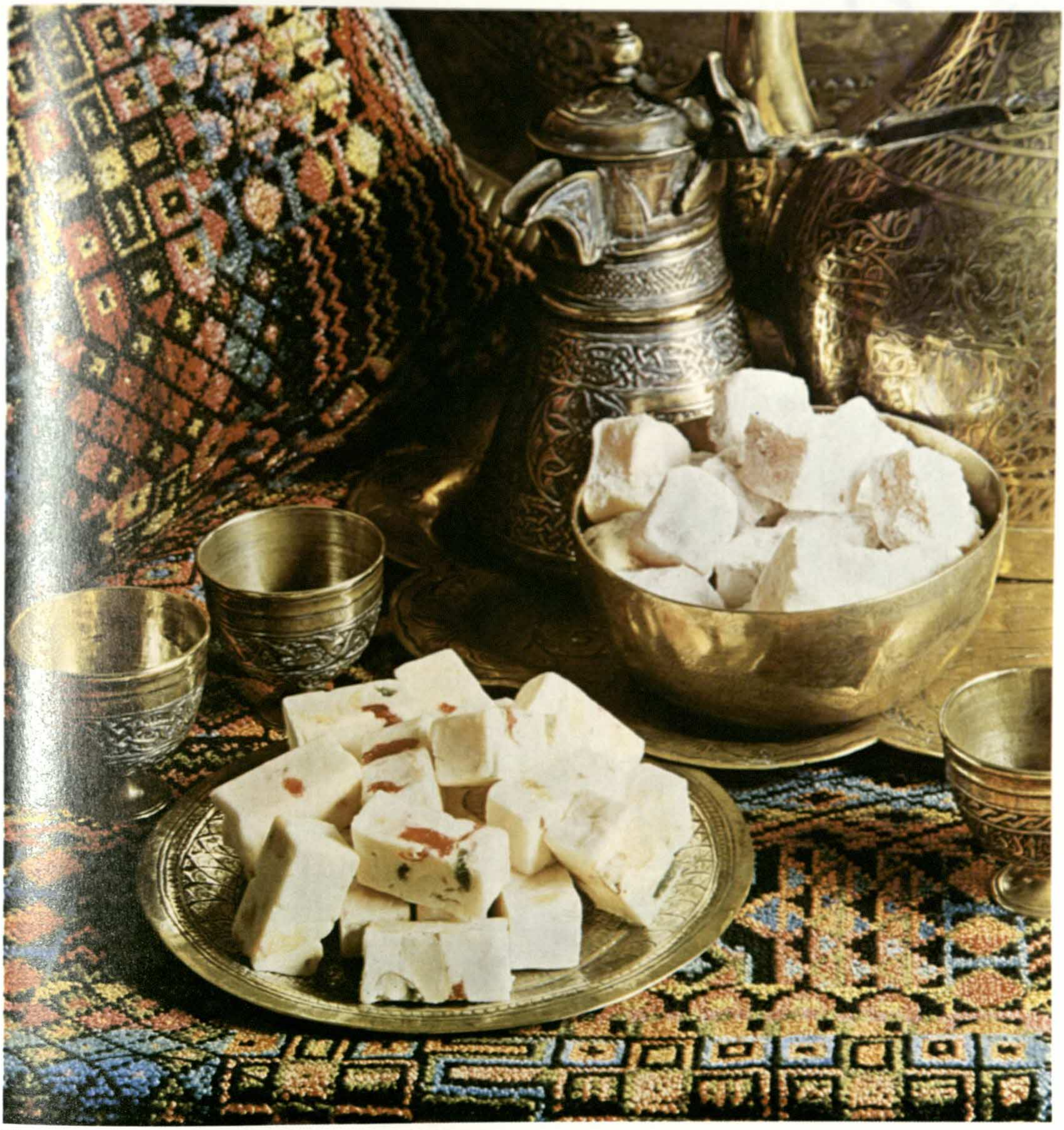
☐ Strain the mixture into a bowl. Quickly stir in the nuts and pour into the prepared tin.

☐ Leave to set firm for 24 hours before cutting into squares.

☐ Toss the squares in mixed sieved icing sugar and cornflour. Pack into an air-tight container, sprinkling extra sugar and flour between the layers.

Melvin Grey

Barley sugar walking sticks and almond brittle lollipops are very popular with children.



Turkish delight and nougat are delicious nut-studded sweets that go particularly well with after-dinner coffee.

Nougat

Delicious chewy nougat sandwiched between sheets of rice paper—wafer thin, brittle, edible paper which can be bought from good stationers. If you do not own an electric whisk you may need a helping hand with this recipe.

You will need:
2-3 sheets rice paper.
350gm (12oz) sugar.
150ml (5fl oz) water.
125gm (4oz) liquid glucose.
25gm (1oz) liquid honey.
1 large egg white.
$\frac{1}{8}$ teaspoon cream of tartar.
50gm (2oz) halved glacé cherries or other glacé fruit.
25gm (1oz) chopped angelica.
25gm (1oz) flaked almonds, chopped brazil- or hazel-nuts.

☐ Damp a 20cm (8″) square sandwich tin and line with rice paper.

☐ Place sugar and water in a heavy pan and stir over very low heat until sugar is completely dissolved.

☐ Add glucose and honey. Increase heat and bring to the boil, without stirring.

☐ Boil to 135°C (275°F).

☐ Meanwhile whisk the egg white with cream of tartar until stiff.

☐ Gradually pour in the hot syrup, whisking all the time.

☐ Continue whisking until the mixture begins to firm, then quickly stir in the fruit and nuts, and tip into the prepared tin. Press down with a metal spoon or spatula.

☐ Cover with a layer of rice paper and leave for at least 12 hours before cutting into bars and wrapping up.

INSTITUTE OF EDUCATION FOR WOMEN
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CALCUTTA 27

Aids for visual effects

Design know-how 49

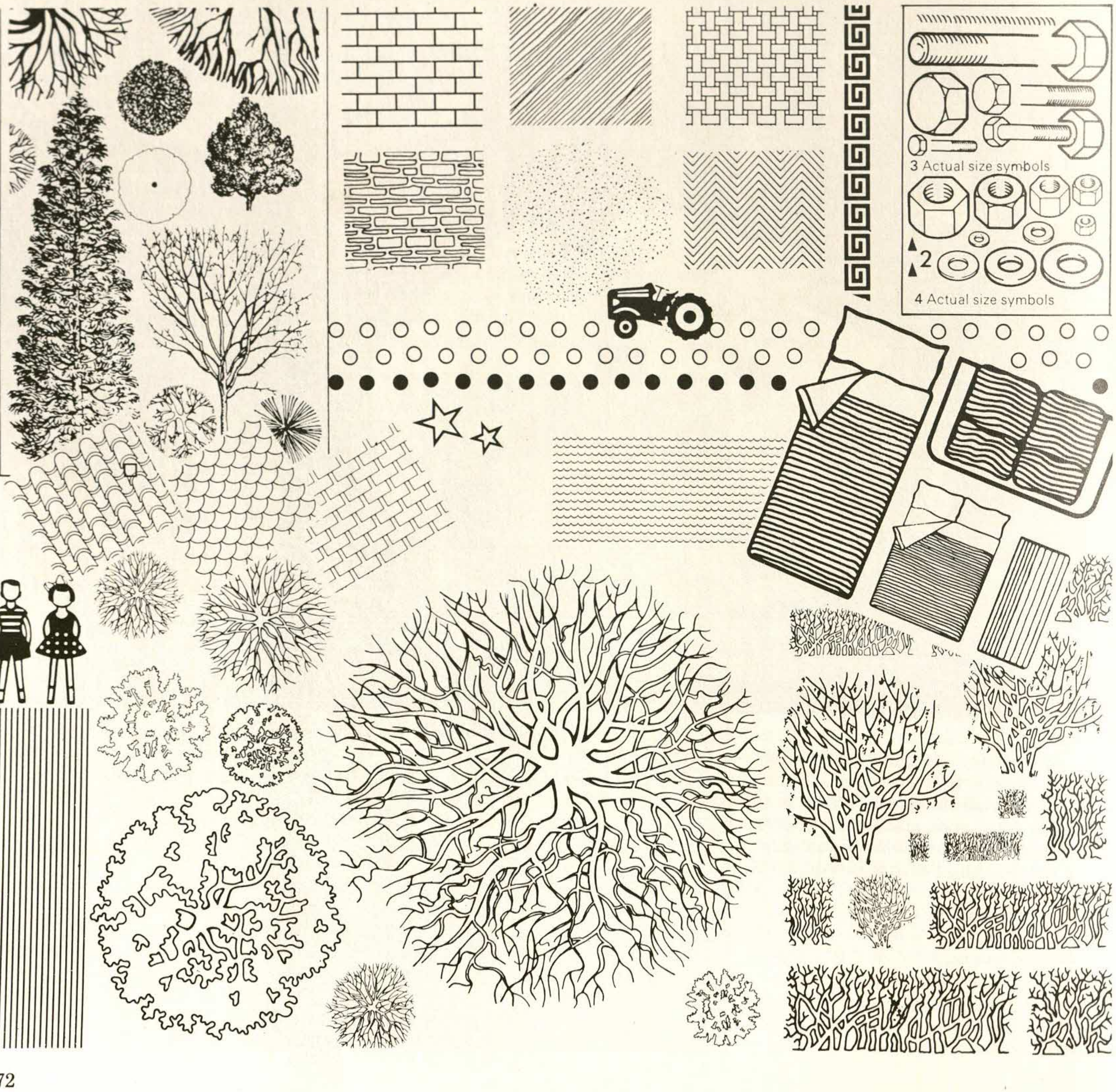
As well as instant lettering (see Design know-how chapter 48, page 1344), there are many other aids for producing visual effects which work similarly. They include plain and decorative borders, devices for tinting or filling in pattern over large areas, even symbols for people, houses and vehicles. The variety and range of the different designs and patterns available are so great that it is worth examining or even buying one of the catalogues issued by the different manufacturers.

As with the instant lettering, the sheets of film are fairly expensive and would probably be uneconomical if you want dozens of copies of your project. For a few copies, however, they are ideal for producing a professional result.

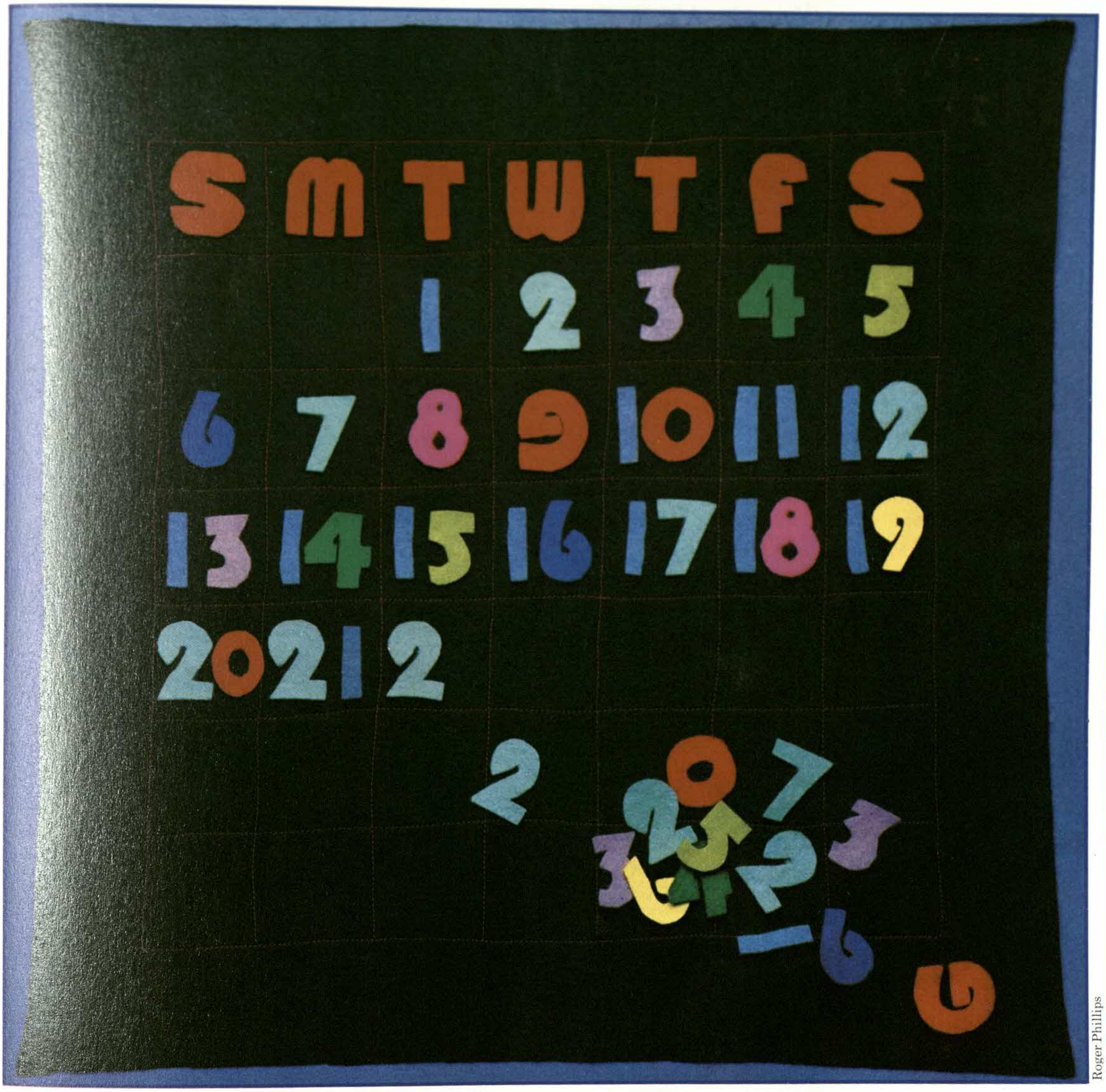
Applying the film. Using a sharp knife (such as a scalpel) cut a section of film slightly larger than the area to be shaded or tinted and peel away from backing paper. Place the film in position on the foundation. The adhesive will hold it while you determine the final positioning. Trim off any excess film and burnish the film in place using your finger.

Symbols are applied exactly like instant lettering; tints and all-over patterns are on adhesive film which is applied as explained above.

These are some of the many patterns and symbols which can be obtained with Letrafilm in the Letraset range.



Trevor Lawrence



Roger Phillips

Creative ideas 49

Perpetual calendar

Just as the seasons follow one another so do the letters and numbers on this calendar, just by rearranging them.

You will need:

45cm (18″) square piece of felt for background.

Eleven 15cm (6″) squares of felt in different colours.

Graph paper.

Tailor's chalk or pins.

Sewing thread in contrasting colour to background.

Tacking thread.

Copydex and a piece of card slightly smaller than the background for mounting calendar or you can use a pinboard and pins.

Using tailor's chalk or pins mark a 35cm (14″) square within the background leaving a 5cm (2″) border on all sides. Divide this inner square into a grid of 5cm (2″) squares (seven down and seven across).

Tack along these lines, making sure they are straight, then machine along the tacking.

Remove tacking threads, pull machining threads to back and tie off.

Select a simple style for letters and numbers—a 'Letraset' catalogue available from artists' suppliers is a useful reference for this.

Draw patterns for numbers on graph paper so they will fit within the background squares. Cut out numbers from 1 to 31 using different coloured felts.

Cut out the first letter of each day of the week. (You can represent months by numbers 1 to 12 or use abbreviations.)

Either mount the calendar on card with Copydex or pin to a pinboard stretching it fairly taut.

Simply press the letters and numbers in place—felt adheres to felt.

As felt adheres to felt no glue is needed and the numbers on this calender can be moved around every month.

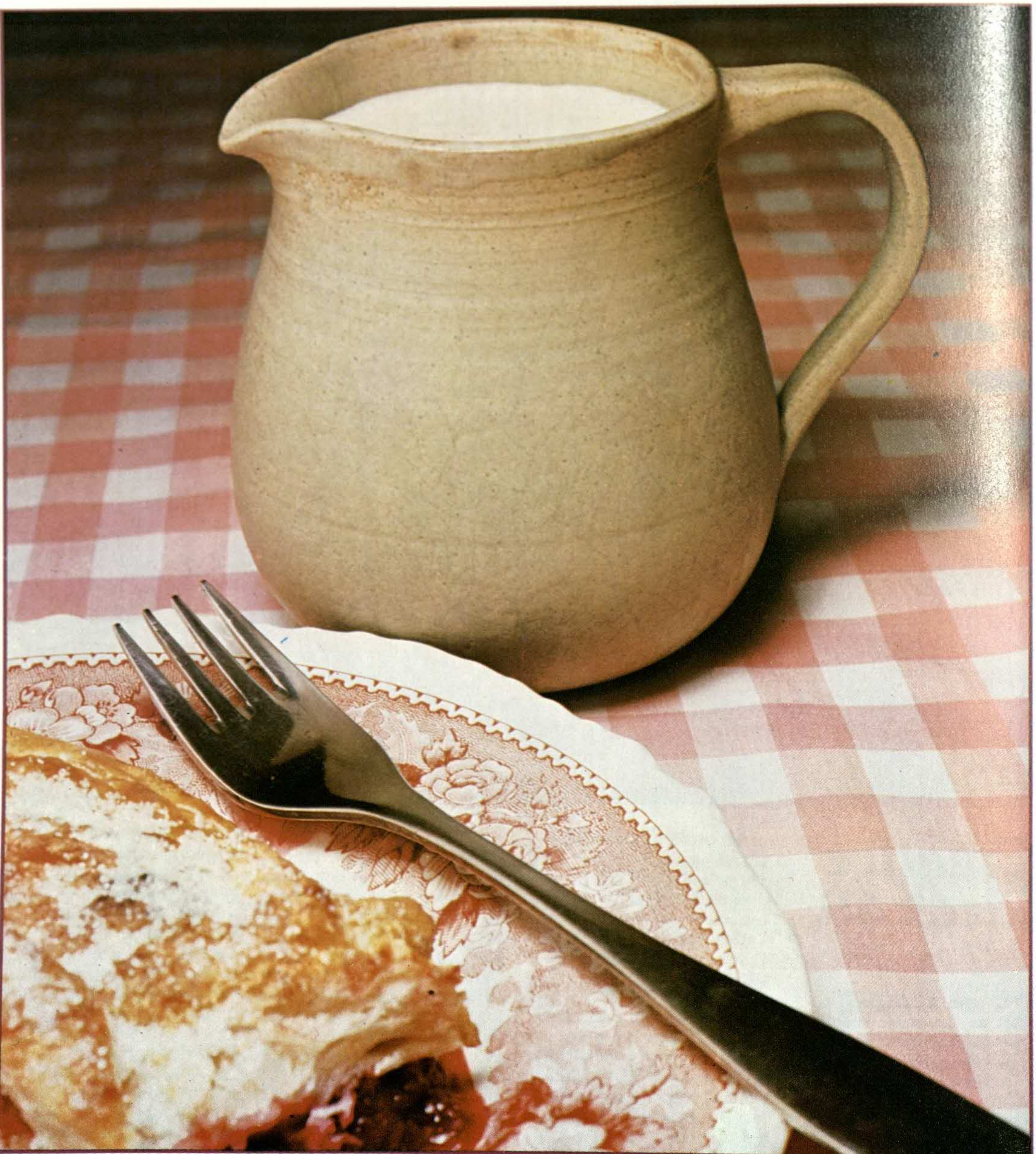
Jugs from a cylinder

The previous chapter considered the adding of handles to thrown cylinders to make mugs. Here, a cylinder is adapted into a jug.

Jugs

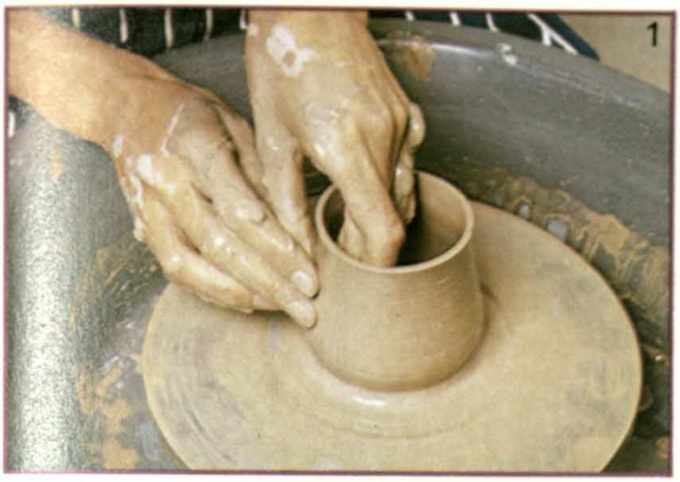
You can turn a straight cylinder into a jug simply by adding a pouring lip, but you may prefer a more rounded, convex shape.

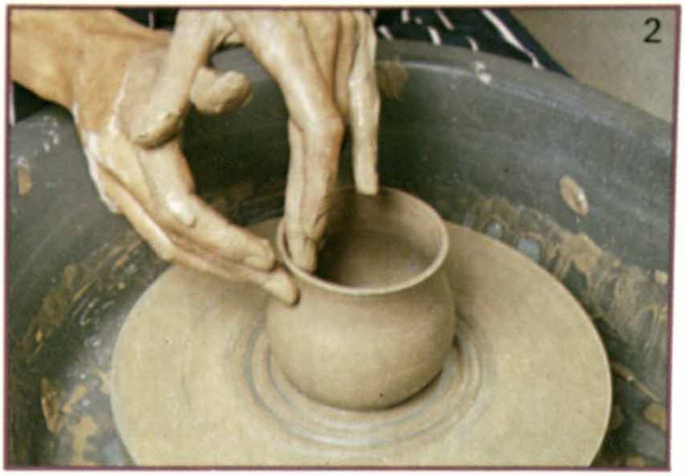
☐ First pull up a cylinder, as described



Jerry Tubby

This jug is made from a basic cylinder by rounding out the sides and making a pouring lip and handle.

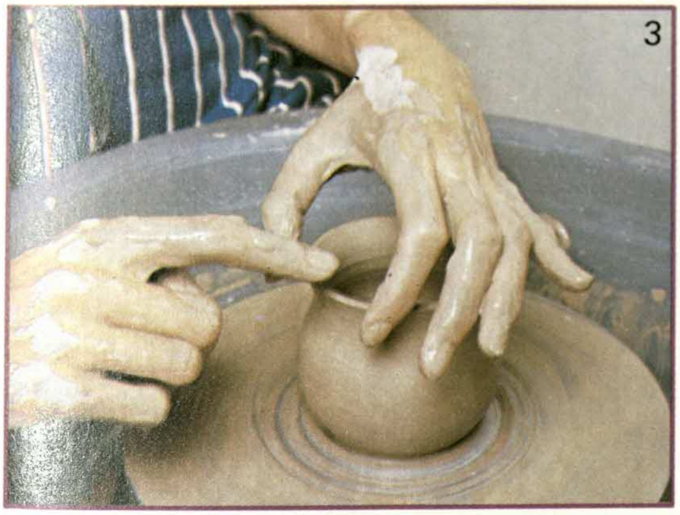


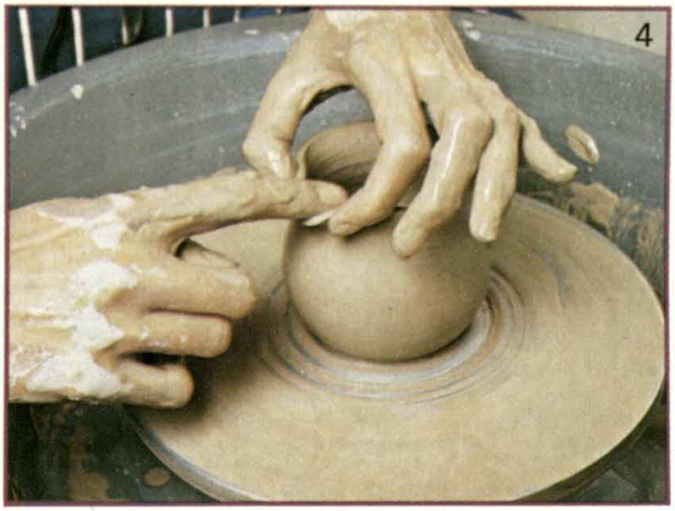


in Clay chapter 30, page 1322.

☐ Place the fingers of your left hand inside the pot towards its base and push gently outwards—at the same time, place the fingers of the right hand on the outside of the pot, slightly above the fingers of the left hand, and press gently inwards (fig.1).

☐ Bring both hands up towards the rim of the pot, gently increasing the pressure of the right hand to form a collar at the top (fig.2).

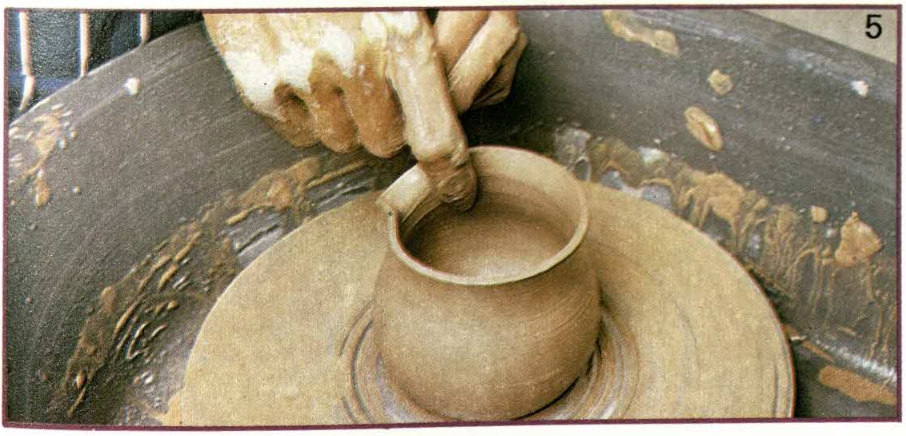




The lip. This is formed with the pot on the wheel but with the wheelhead still.

☐ Place forefinger and thumb of your left hand on the rim of the pot, about 2.5cm (1″) apart. With the forefinger of the right hand gently stroke the clay between the finger and thumb, outwards and downwards (figs.3 and 4).

Be careful not to split the clay by pressing too hard and be sure to moisten your finger before moulding the lip.



Nelson Hargreaves

☐ When you have formed a good pouring lip, you will find that the rim of the pot is off-centre. Re-centre it by spinning the wheel very slowly and holding the forefinger along the inside edge (fig.5).

Adding a handle. Jugs without handles are useful for keeping in a refrigerator because they take up less space. However, if you want to add a handle, do so when the jug is at the leather-hard stage by the method described in Clay chapter 31, page 1346.

Remember that, in the case of a jug, the top of the handle must be attached directly opposite the pouring lip and high enough to allow the jug to tilt easily.

Making a coffee pot

The next chapter will consider the fitting together of cylinders to form tall shapes—and the adapting of a tall shape into an attractive coffee pot, complete with fitted lid.

Paint box, jug and brushes

Cloth — soft sculpture 2

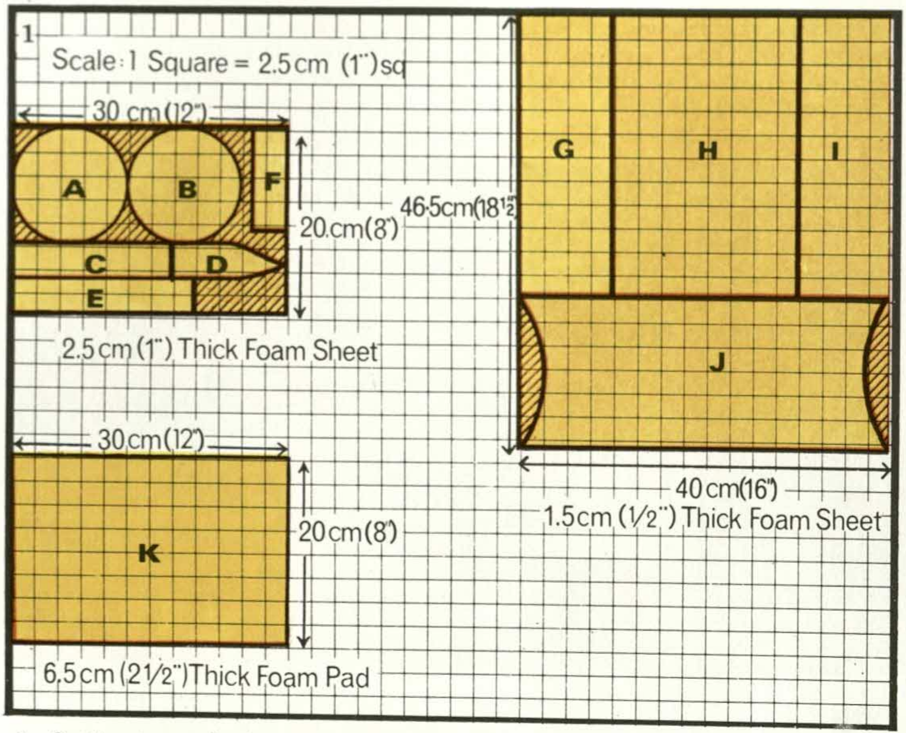
Soft toy making has enormous, yet unexplored creative possibilities.

Because of its technology, this craft lends itself to a kind of sculpture with tactile as well as visual appeal. Different effects can be obtained according to the design adopted; for example a slight distortion of the shape, exaggeration of some dimensions as in caricatures, or changes of scale can result in very strange and amusing effects.

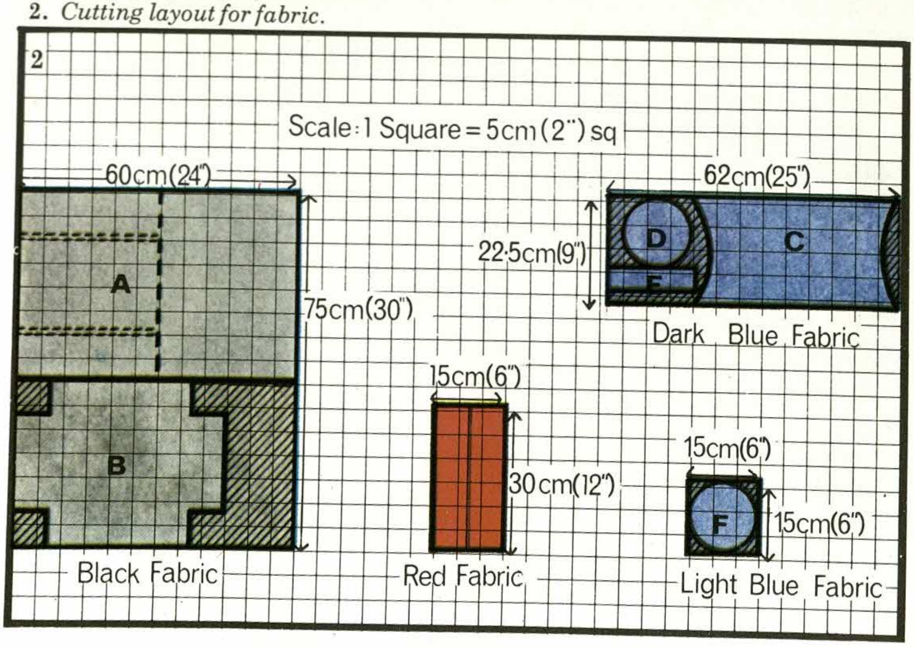
A great deal can be done with colour and texture, by choosing materials such as velvet, velour, pile jersey or towelling and working on them with embroidery, appliqué, or quilting.

There are two basic methods for making soft objects. The first one is by making the outer skin or case out of a firm fabric and then stuffing it with kapok, rice or foam crumble, sometimes reinforcing with wires. With this method the final shape is determined mainly by the fabric and patterns so they have to be made very accurately.

The second is by modelling a solid piece of foam using a craft knife and general-purpose adhesives (such as Bostik 1), or by stitching it in different ways, then covering this foam with stretch fabrics, preferably with a pile. The covering is secured mainly by hand stitching, and the pile will hide the stitches. Shape is determined mainly by the foam foundation. The painting set is made by the second method.


1
Scale: 1 Square = 2.5cm (1")sq
30 cm (12")
A
B
F
C
D
E
20.cm(8")
46·5cm(18½")
G
H
I
J
2.5cm (1") Thick Foam Sheet
30cm(12")
K
20cm(8")
6,5cm (2½")Thick Foam Pad
40cm(16")
1.5cm (½") Thick Foam Sheet

1. *Cutting layout for foam.*
2. *Cutting layout for fabric.*



The painting set

Size of box with lid closed about 33cm x 23cm (13" x 9"), 9cm (3½") high without brush. Jug 16cm (6½") high without brush.

You will need:

Jersey towelling:
75cm x 60cm (30" x 24") in black.
62cm x 22.5cm (25" x 9") in dark blue.
15cm x 15cm (6" x 6") in light blue.
30cm x 15cm (12" x 6") in beige.
30cm x 15cm (12" x 6") in red.
Scraps at least 5cm (2") square in ten other colours.
30cm x 20cm (12" x 8"), non-woven interlining.
Polyurethane foam:
1 piece 30cm x 20cm (12" x 8") x 2.5cm (1") thick.
1 piece 40cm x 46.5cm (16" x 18½") x 1.5cm (½") thick.
1 piece 20cm x 30cm (8" x 12") x 6.5cm (2½") thick.
Matching thread, and pins.
Craft knife.
General-purpose adhesive such as Bostik 1, and pencil or chalk.

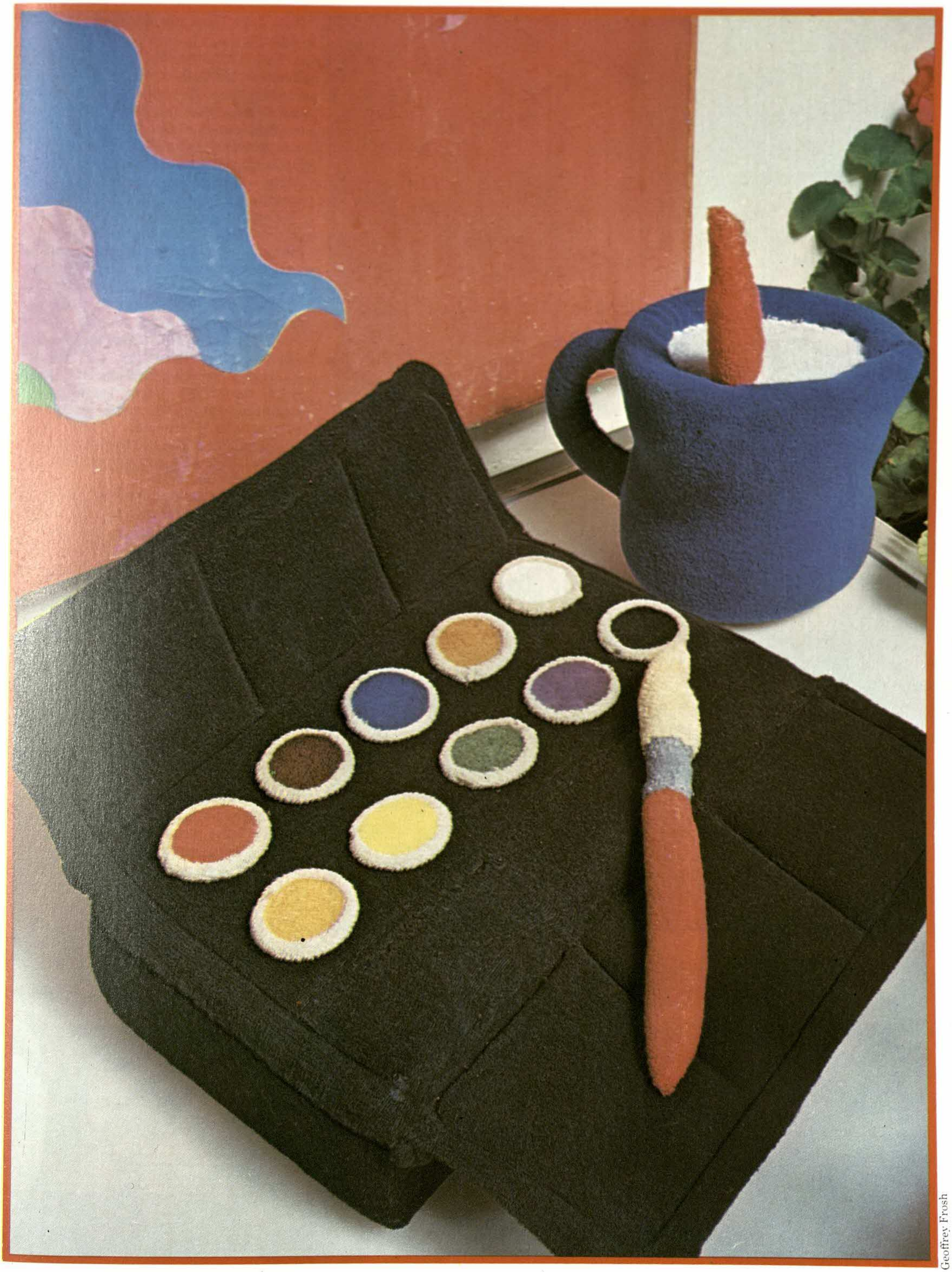
Cutting out

☐ Following the cutting layout for the foam (fig.1), mark A, B, C, D, E and F on to the 2.5cm (1") foam with pencil or chalk and cut out using a craft knife. Mark G, H, I and J on to the 1.5cm (½") foam and cut out in the same way.

☐ Following the cutting layout for fabric (fig.2) mark and cut out pieces **a** and **b**, from black, pieces **c**, **d** and **e**

Soft sculpture in foam and towelling. Designed by Sylvia Libedinsky and inspired by a paint box and water jug.

Diana Groves



Geoffrey Frosh

from dark blue, piece **f** from light blue.

Making up

☐ Cut ten pieces each 5cm (2″) square from the coloured towelling.

☐ Spread a thin coat of adhesive on the interlining and stick the squares of towelling on to it, leaving until completely dry (fig.3).

☐ Taking the beige fabric cut ten bias strips 1.5cm (½″) wide and 12.5cm (5″) long.

☐ From squares mounted on interlining cut ten circles each 4.5cm (1¾″) in diameter and bind with beige strips (fig. 4a). Taking 3mm (⅛″) stitch right sides together then turn the bias to the back of the circle, trim and clip the excess fabric and stick with adhesive to the back of the circle, pressing flat with your fingers (fig.4b).

☐ Fold piece **a** in black fabric in half with the right sides together and machine stitch the two short ends taking 5mm (¼″) seams.

☐ Turn through and stitch two double seams 0.5cm (¼″) apart and 10cm (4″) from each end.

☐ Fit the three pieces of 1.5cm (½″) foam marked G, H and I in fig.1 inside this envelope and sew up the openings by hand with very small stitches (fig.5).

☐ Tack the quilting pattern and machine stitch, working two rows of stitching 0.5cm (¼″) apart (fig.6).

☐ Take piece K of foam and spread adhesive thinly over the bottom, leave it a few minutes to dry then place it on to wrong side of black fabric piece **b** (fig.7), stretching the four sides up tightly with the help of pins and folding the flaps over the top and sticking them with adhesive. Hold with pins until it is dry.

Sew the four corners by hand with small stitches.

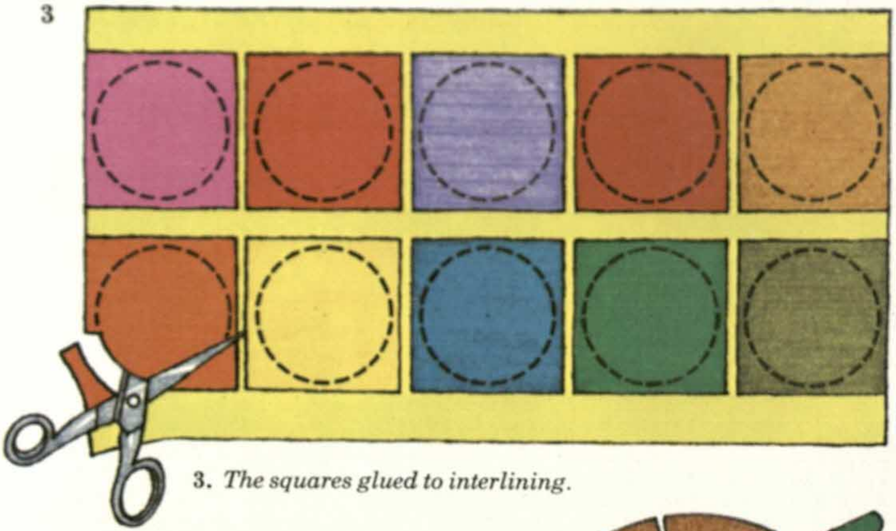
☐ Place the quilted top into position on the base, pin and sew all around by hand, stretching tightly.

☐ Stick the coloured circles to the box securing them with pins until completely dry (fig.8).

Water jug

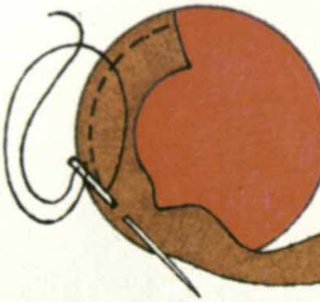
☐ Take piece J in 1.5cm (½″) foam (this forms the wall of the jug) and

3



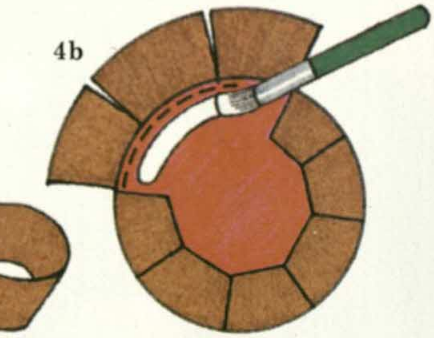
3. *The squares glued to interlining.*

4a



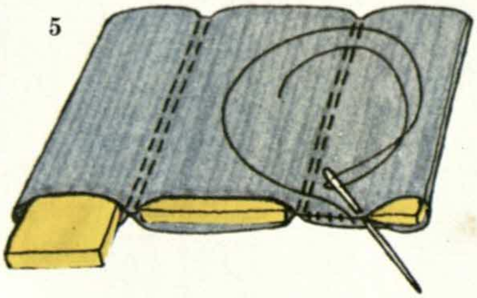
4a. *Stitching binding to the circle.*

4b



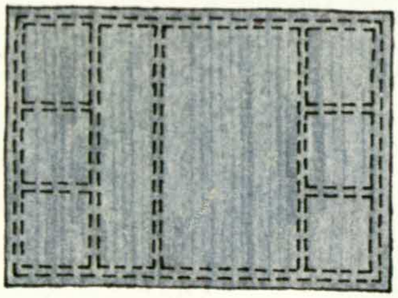
4b. *Binding glued to wrong side.*

5



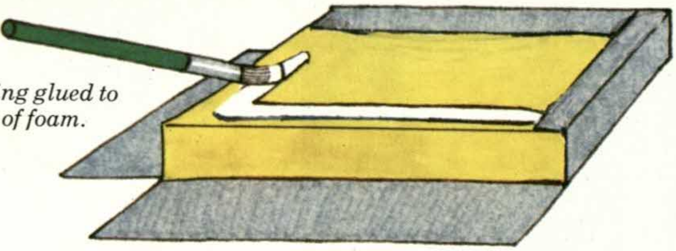
5. *Foam in place with ends stitched.*

6



6. *Quilting pattern machine stitched.*

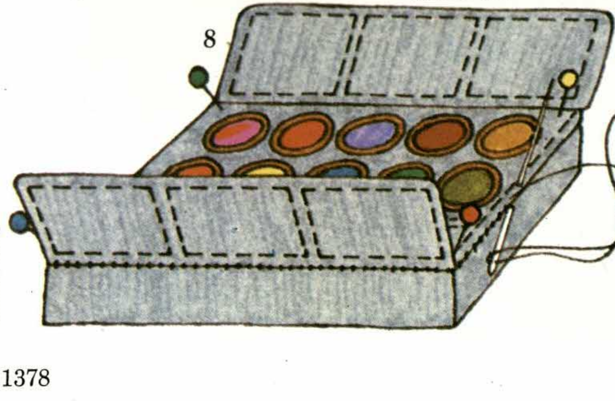
7



7. *Towelling glued to both sides of foam.*

8. *Top is stitched to base then circles glued on.*

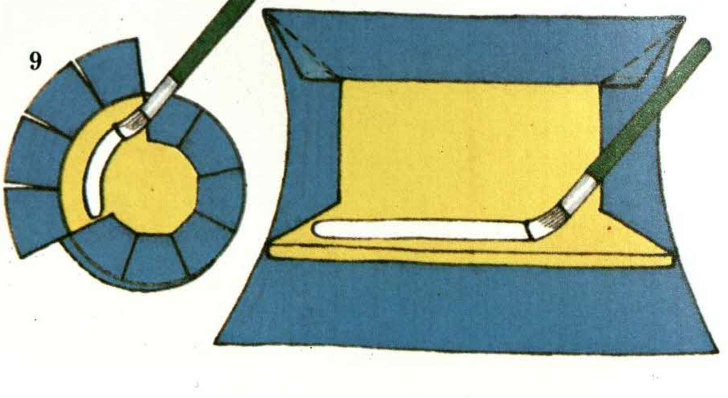
8



Diana Groves

9. *Covering the sides of the jug and base.*

9



pieces A, B and E in 2.5cm (1″) foam.

☐ Cover the outside of the jug and one circle with dark blue fabric, and the other circle in pale blue fabric for the water (fig.9). Stretch and glue the edges of the fabric, trim the corners and clip around the circles. Keep the foam flat and allow to dry.

☐ For the handle, cover foam piece E with blue fabric, turn in the edge and stitch the fabric tightly around the foam to round the edges. The stitching should be tight; this will make the strip more rigid (fig.10).

☐ When all the pieces are dry stitch the sides of the jug together, then stitch the bottom into place (fig.11). Make a small dart on the inside to shape lip of jug.

☐ Fill the jug with foam crumble, (made by cutting up the left-over pieces of foam) to within 4cm (1½″) of top, modelling it with your hands as you do so.

☐ Tie a strip of scrap fabric around the waist of the jug to help mould it (fig.12).

☐ Place the light blue circle on top of the foam crumble making sure it is horizontal and sew all around, pinching into the foam so that the jug returns to its original shape after it is squeezed.

☐ Remove the strip of fabric tied around the jug.

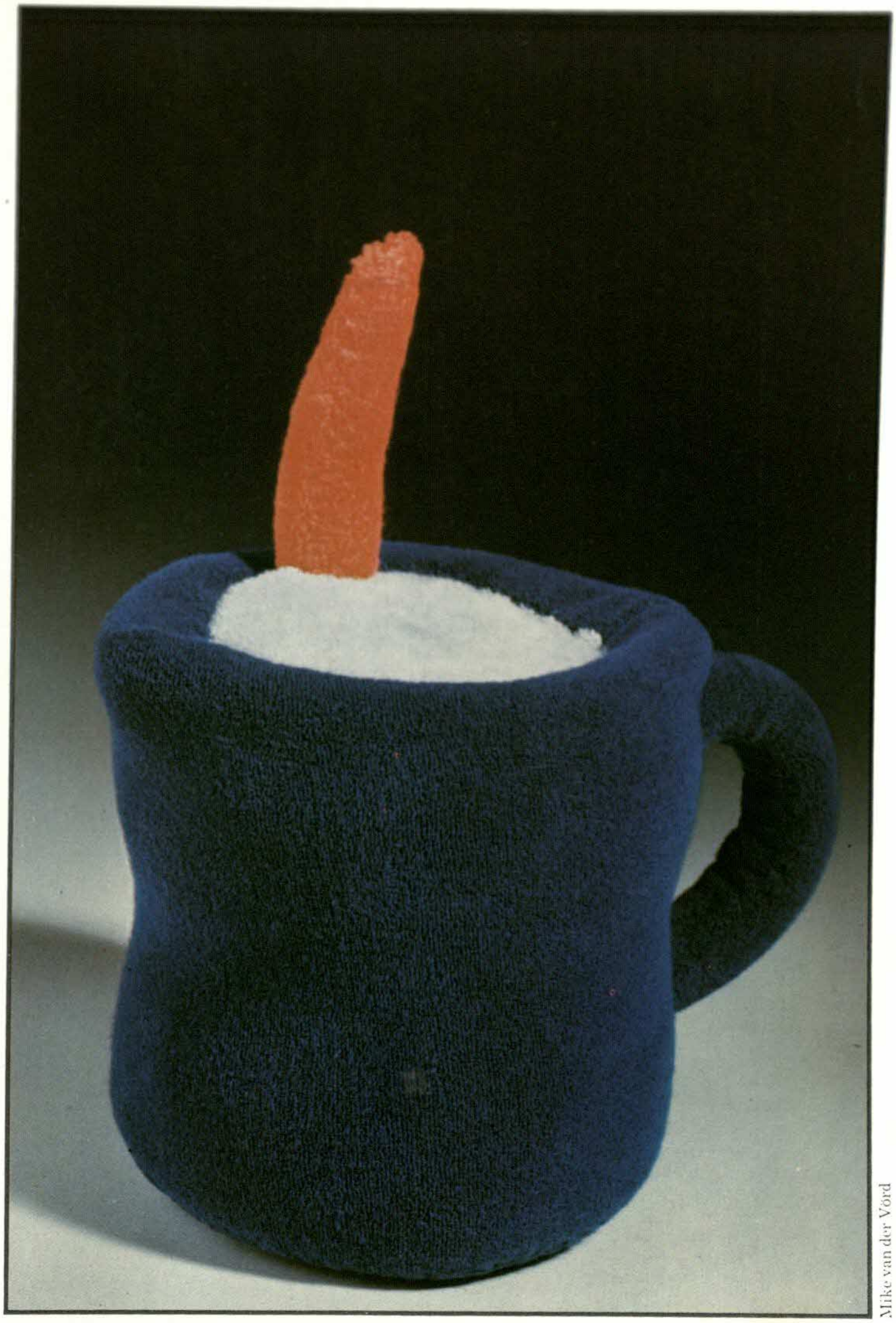
☐ Attach the handle to the jug. Any further moulding to correct the shape can be made with stitches which tighten the foam where desired.

Brushes

☐ Make in the same way as the jug handle using foam pieces C, F and D. C and F are covered in red and D in a scrap of beige, shaping into a point with stitches for the 'bristles'.

☐ For the brush in the water use piece F and shape one end to a point when stitching, stitch the other end to one side of the water on top of the jug.

☐ For the loose brush use pieces C and D. Having covered both pieces, stitch them firmly together and hide the join with a scrap of towelling, pulling it in tightly.

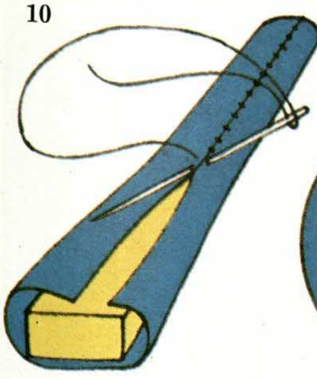


Mike van der Vord

The jug is filled with chips of foam and moulded by hand and with stitches.

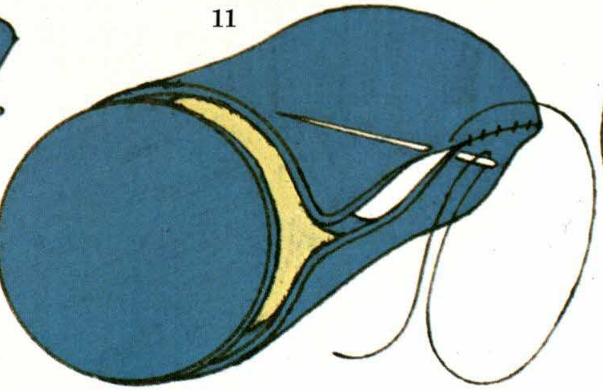
10. *Jug handle covered in towelling.*

10



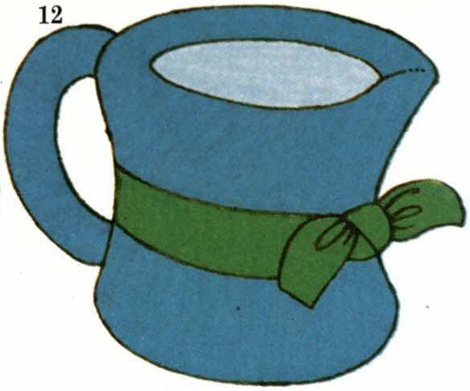
11. *Stitch sides of jug then base.*

11



12. *Fabric tied around waist of jug.*

12

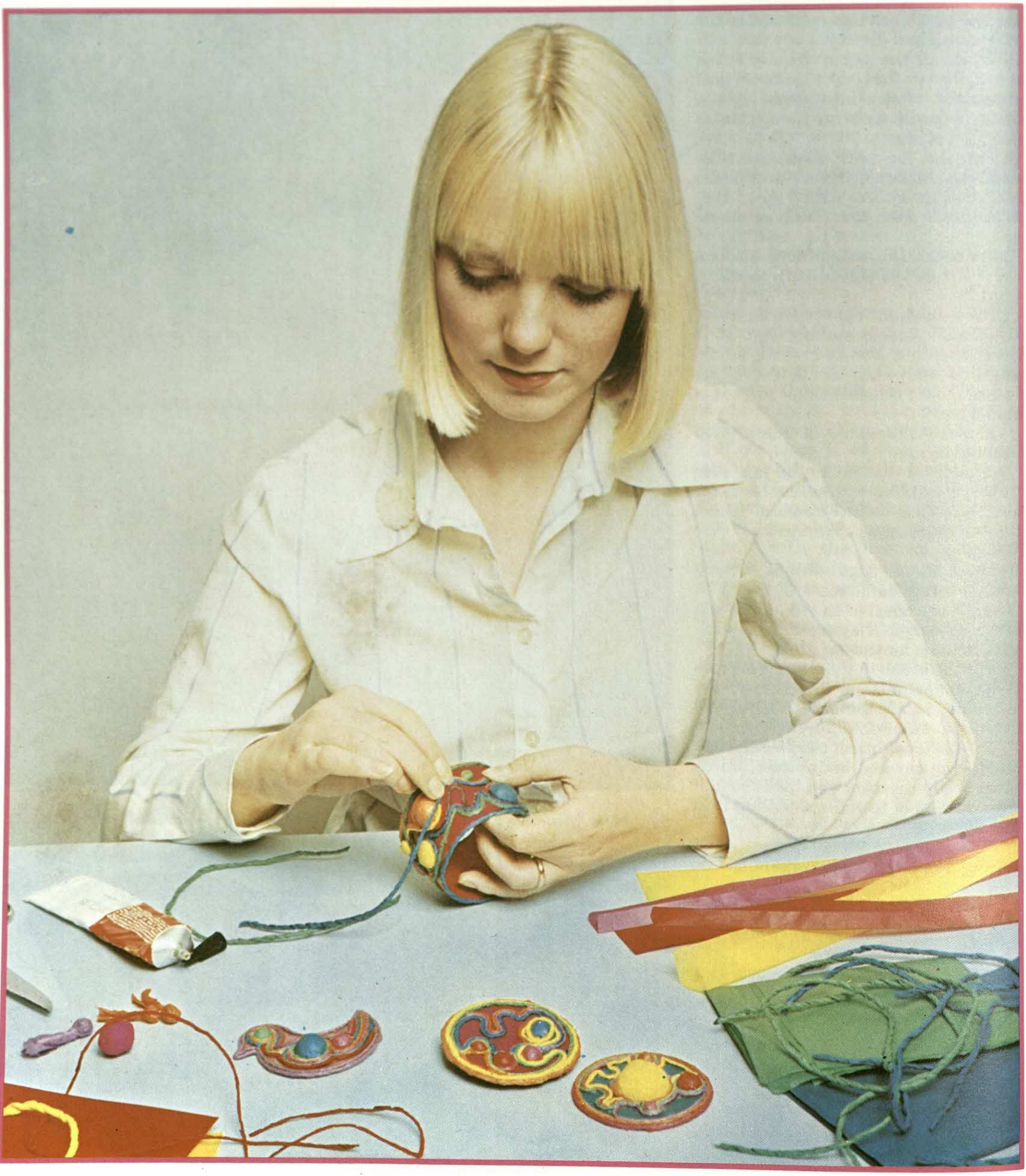


Twisted tissue jewel effects

Paper 36

It seems a pity to unwrap a present and immediately condemn to the waste-paper basket carefully chosen and prettily coloured tissue paper wrappings.

It is true that used parcel tissue paper does not have quite the same pristine colouring and crisp texture as a brand new sheet. Tell-tale crease marks clearly indicate how the paper was folded to cover the gift and, if adhesive



Dick Miller

tape was used to secure the package, the paper may be torn in places. But even creased, oddly shaped pieces of tissue paper with jagged edges are worth saving for use in a papercraft such as tissue jewels.

Twisted tissue jewels are bright and gay—and far more durable than such a fragile paper suggests. They are simple to make and it is fun creating designs. If you wish, of course, you can use purpose-bought tissue to make these boldly beautiful jewel effects. But, providing you have a colourful selection to hand, it is quite unnecessary to buy tissues specially for this craft. Used tissue has the advantage of being cost free and is, in fact, the ideal material—because the techniques involved in making tissue jewels include cutting, tearing, crumpling and twisting the paper!

Basic jewel shapes

There are only two basic jewel shapes —'stones' and 'strings'.

'Stones', irrespective of size, are always made by the same method. First a piece of tissue paper is screwed up and rolled between the palms into a ball shape (fig.1).

Wrap the tissue paper ball tightly in a piece of tissue just large enough to encase it completely (fig.2).

Then cover the ball with a larger piece of tissue. Pinch and twist the ends of this piece of tissue to form a neck, having spread the inside of the neck paper with a little clear general-purpose adhesive such as UHU (fig.3).

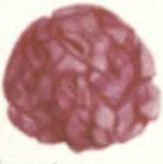
When the adhesive has completely dried, snip off the neck with a pair of sharp scissors and slightly flatten the ball in the palm of your hand to give it a domed top and a flattish base (fig.4). This is to make the 'stone' easier to mount on to the surface to be decorated.

'Strings', whether long or short, are always made by the same method. It is difficult to make successful 'strings' using strips of tissue over 23cm (9″) in length, but the effect of a longer 'string' can be achieved by butting two or more 'strings' end to end when mounting the jewels.

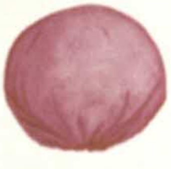
Cut a piece of tissue to the length required, making it 2.5cm-6cm (1-2½″) wide. Fold the long cut edges towards the centre (fig.5).

Moisten the forefinger and thumb of both hands with a little water and twist the strip of tissue into a string (fig.6). Work slowly and carefully from one end of the strip to the other always keeping the twisting movement in the same direction.

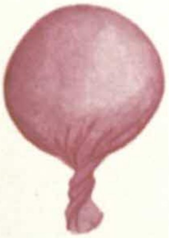
Keep old gift wrappings and use them for tissue jewel effects—a bold and colourful papercraft the whole family will enjoy.



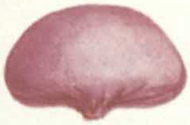
1. *To make a stone, screw a piece of tissue into a tight ball.*



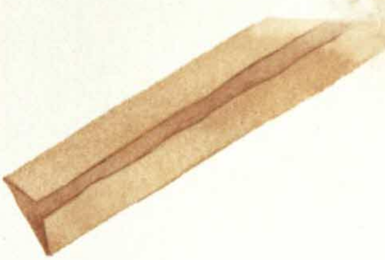
2. *Cover the ball with tissue just large enough to encase it.*



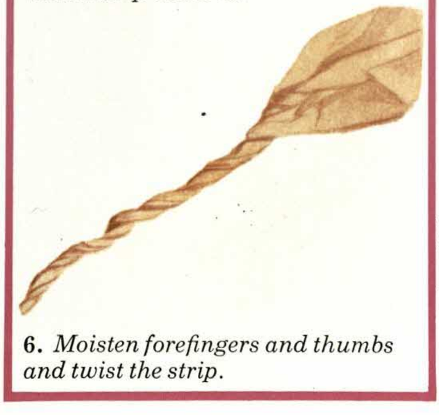
3. *Cover with a second, larger piece of tissue. Spread a little adhesive inside the tissue 'neck' and twist to hold in shape.*



4. *When adhesive is completely dry, snip off the 'neck' and flatten the 'stone' base.*



5. *For a 'string', fold long edges of tissue strip inwards.*



6. *Moisten forefingers and thumbs and twist the strip.*

Barbara Firth

Design effects

Although there are only two basic jewel shapes, a variety of effects can be achieved.

Large and small 'stones' can be mixed with 'strings' to create interesting geometric patterns or to make simple colourful pictures. Use 'stones' alone, adding a few sequins here and there for a touch of sparkle if you wish. 'Strings' can also be used alone to produce a rich, textured look: groups of many coloured strands closely aligned can be built up into lovely abstract designs similar to Mexican yarn collage or Florentine embroidery.

Decorative ideas

Stick your tissue jewels on to solid bases to make a whole host of delightful gifts, jewelry items and decorations. (Some of the suggestions given here involve re-cycling old containers so, if your tissue is second hand too, your costs will be minimal.)

Tissue jewelry is ideal for fancy dress and theatrical props—and elegant enough for sophisticated party wear. Make jewelry durable by spraying with protective clear varnish—two or three thin coats are more effective than one thick one.

Flat cardboard shapes, pierced and threaded with a loop of colourful wool or cotton, can be decorated with tissue jewels to make cheerful Christmas tree decorations—more original, cheaper and less easily broken than shop-bought glass baubles.

Use decorated shapes for mobiles too, or mount them on to jewelry findings to make fun brooches, drop ear-rings and pendants to hang on chain necklets or key rings.

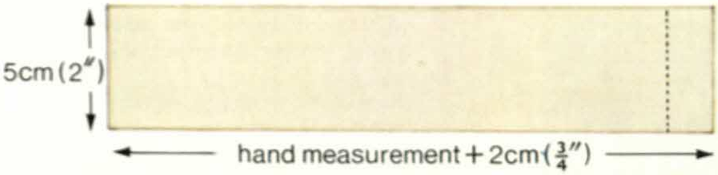
Old tin cans (with rough edges filed down) can be decorated to make charming pencil or cigarette holders. A really large can could be transformed to make an attractive wastepaper basket or, with the correct electric fitting, a lamp base.

Plastic cosmetic jars and tubs can be treated in the same way to make pretty containers. If they are very light weight, prevent containers from toppling over by partly filling them with sand or pebbles covered with a false bottom made from a piece of cardboard.

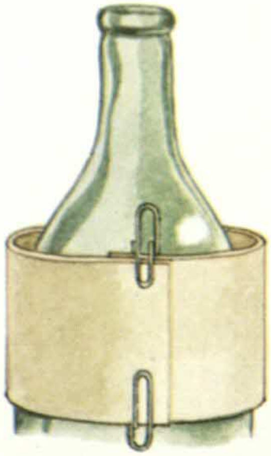
Cover matchboxes with tissue jewels—to use for matches or keeping stamps or hairpins.

Decorate bought or home-made cardboard boxes (see Paper chapters 12, 13 and 14, pages 422, 478 and 506 for how to make boxes) for special gift presentation, or fill with sand or pebbles to make them heavy, seal well and use as paperweights or book ends.

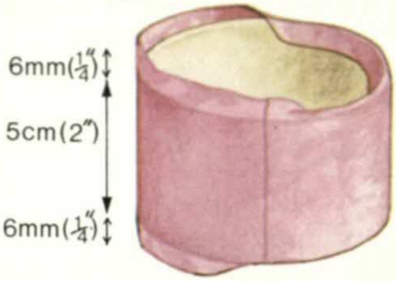
Cheap, plastic mirror frames can be brightened with tissue jewel decorations. So can old picture frames, but



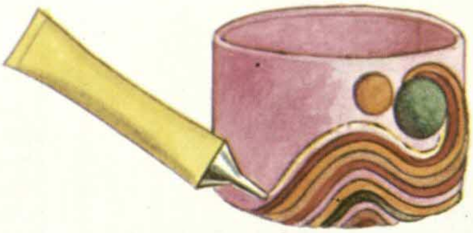
7. *Measurements for cardboard bangle must allow for seam overlap.*



8. *Hold glued seam in place with paperclips and leave to dry.*



9. *Stick tissue round the bangle and over top and bottom edges.*



10. *Draw a thread of glue on the bangle and stick 'string' on to it.*

Barbara Firth

Jerry Tubby

Tissue jewelry is bright and gay—and surprisingly durable if varnished.

remember that tissue decorations are difficult to remove without damaging the original surface—so check that your frame is not a valuable antique before embarking on such a project.

To make a bangle

A crown or ring could be made by the same method but on a larger or smaller scale.

You will need:

A piece of stiff card or cardboard.
Tissue paper in assorted colours.
Clear general-purpose adhesive, such as UHU or Evo-Stik Clear.
A bottle.
Tape measure and ruler.
Pencil and paper clips.
Scissors and a pair of tweezers.
Polyurethane spray varnish.

☐ Cut a piece of card 5cm-7.5cm (2"-3") wide and long enough to encompass your hand at the knuckles plus 1cm (¾") overlap (fig.7).

☐ Mark the overlap on ends of the card. Then, to join into a circle, spread a thin coat of adhesive on both inner surfaces of the overlap.

☐ When the adhesive is tacky form the strip into a ring, overlapping the glued ends by 2cm (¾").

☐ Use paper clips to hold the overlap securely and slip the bangle over a bottle to hold it in a circular shape while it dries (fig.8).

☐ When the bangle is completely dry, remove it from the bottle and give a gentle squeeze to form a complete circle.

☐ Now cover the bangle with tissue to provide a colourful background for your jewels. Cut a piece of tissue equal to the circumference and 1.2cm (½") wider than the bangle.

☐ Spread the whole outside of the bangle with a thin even coat of adhesive and spread a little adhesive on the inside top edge of the bangle. While the adhesive is still wet, press the tissue paper into position round the bangle, and inside sticking 6mm (¼") overlap over the top and inside the bangle (fig.9). Don't worry if a few wrinkles appear in the tissue paper.

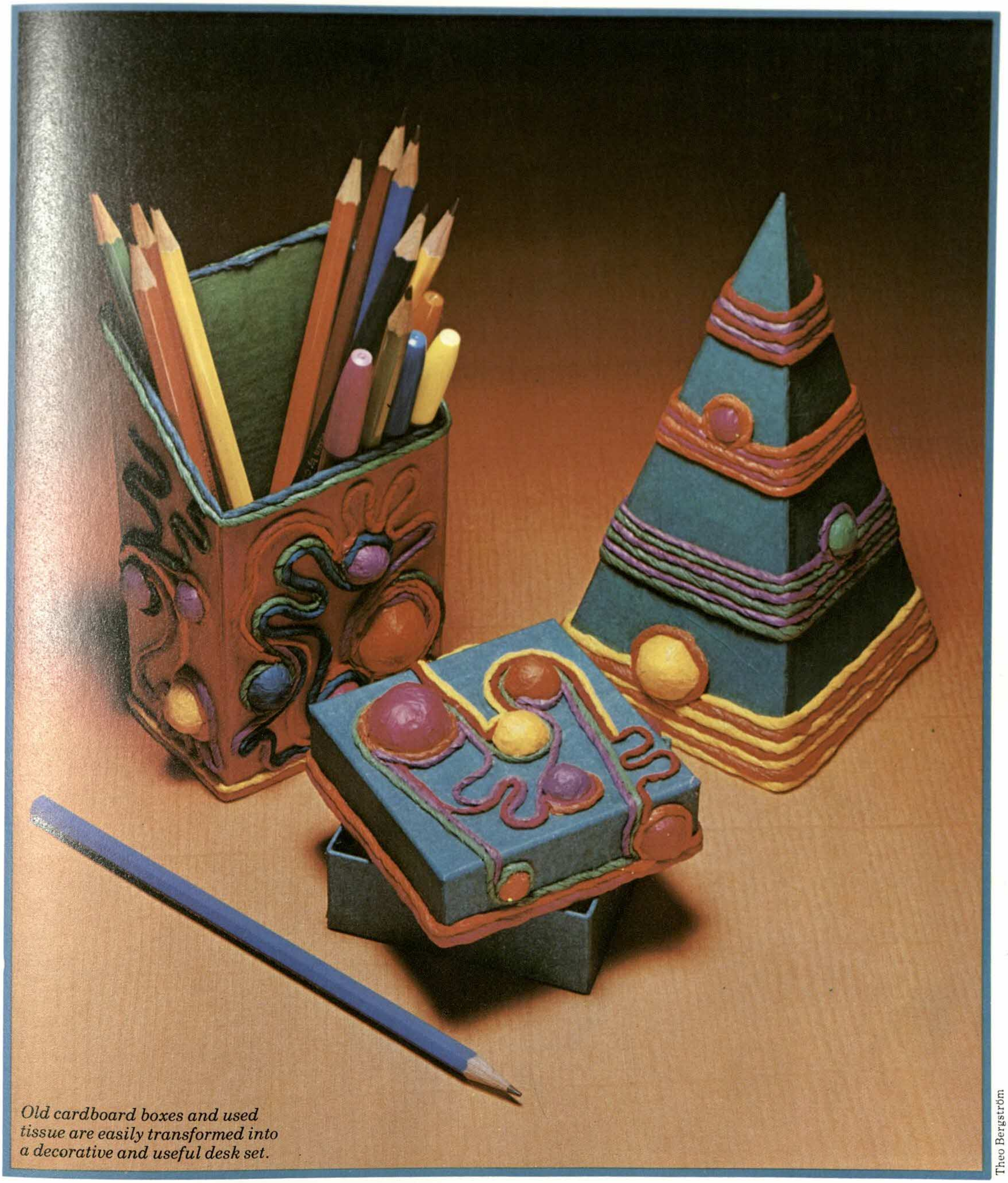
☐ Spread a little adhesive along the inside bottom edge of the bangle, and stick down the tissue overlap.

☐ Cut a piece of tissue equal to the circumference of the bangle and fractionally narrower than its width.

☐ Spread a thin coat of adhesive over the inside of the bangle and stick the tissue into position while the adhesive is still wet.

☐ While the bangle is drying, prepare 'stones' and 'strings' as you wish to decorate your bangle, following the instructions already given.

You may like to sketch a design on rough paper first, but it is not difficult to make attractive freehand patterns



Old cardboard boxes and used tissue are easily transformed into a decorative and useful desk set.

Theo Bergström

directly on to the bangle.

☐ If you are using 'stones' and 'strings', stick the 'stones' on to the bangle first. Spread the underside of the 'stone' thinly with adhesive and, when tacky, press firmly into position on the bangle.

☐ 'Strings' may need to be re-rolled before gluing. Quickly re-twist them into shape. Don't apply adhesive to the 'string' but apply a thin thread of it to the bangle, drawing the thread in the desired pattern (fig.10). Then press the 'string' into position along the glue line. Use tweezers, if required, to help position the 'string'.

☐ When the bejewelled bangle is quite dry, spray inside and out with clear varnish. Spray lightly (the dyes in tissue are inclined to run if the paper gets very wet) and, when dry, give a second coat.

☐ For greater durability later, add a third coat of varnish.

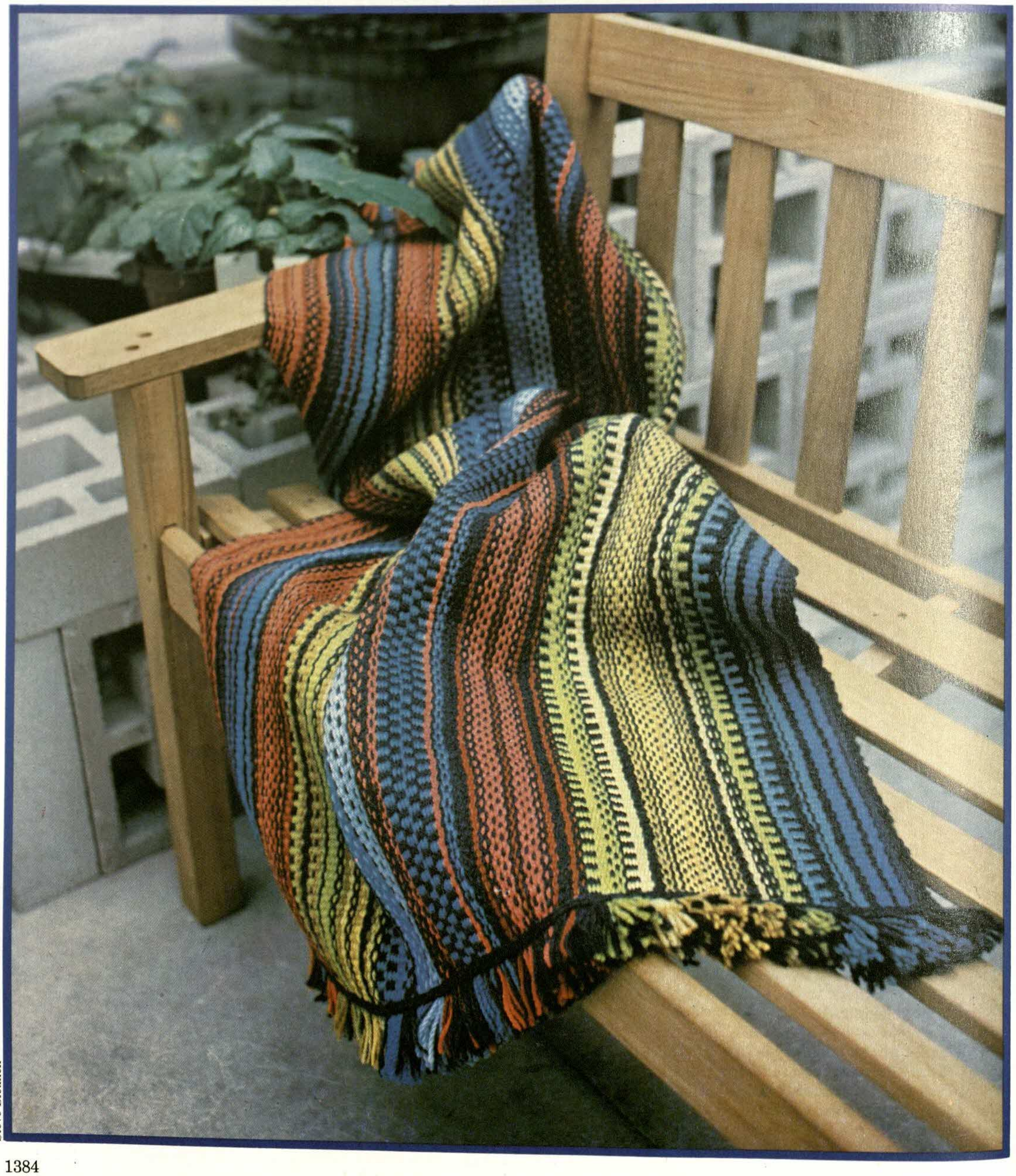
Designing inkle braids

After a little practice on the inkle loom (Weaving chapter 15, page 1356), designing your own inkles is very simple.

Designing

As an inkle is a warp-faced fabric, the

Floor rug made from joining twelve inkles. Each braid was woven with 2-ply carpet wool. Designed by Sheila Payne.



Steve Bicknell

choice and arrangement of colours in the warp is extremely important for this is what provides the design. Gay, contrasting colours are always useful with black and white helping to outline the effects.

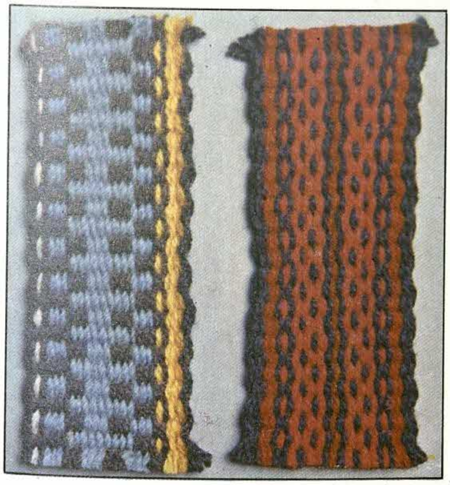
Texture. Texture can be obtained by using thick and thin, dull and shiny, fancy spun or plain threads. A braid can be completely transformed by using a thick weft, for instance, or by substituting two silver warp threads for two wool ones. See Weaving chapter 5, page 374, for details about unusual materials.

Weft. The weft should be a little coarser than the warp but as it is almost completely covered, its colour is unimportant. However, it will show very slightly at the edges of the braid and it is advisable to warp four threads at either side of the inkle in the same colour as the weft. If this rule is not followed, you will get a spotted effect on the side of your braid.

Planning. Squared paper is invaluable for all warp plans. Remember to think of the warp in pairs—one open and one through the leash. If you make proper warp charts on squared paper (figs.1 to 6 overleaf) you will have a record of your braid designs.

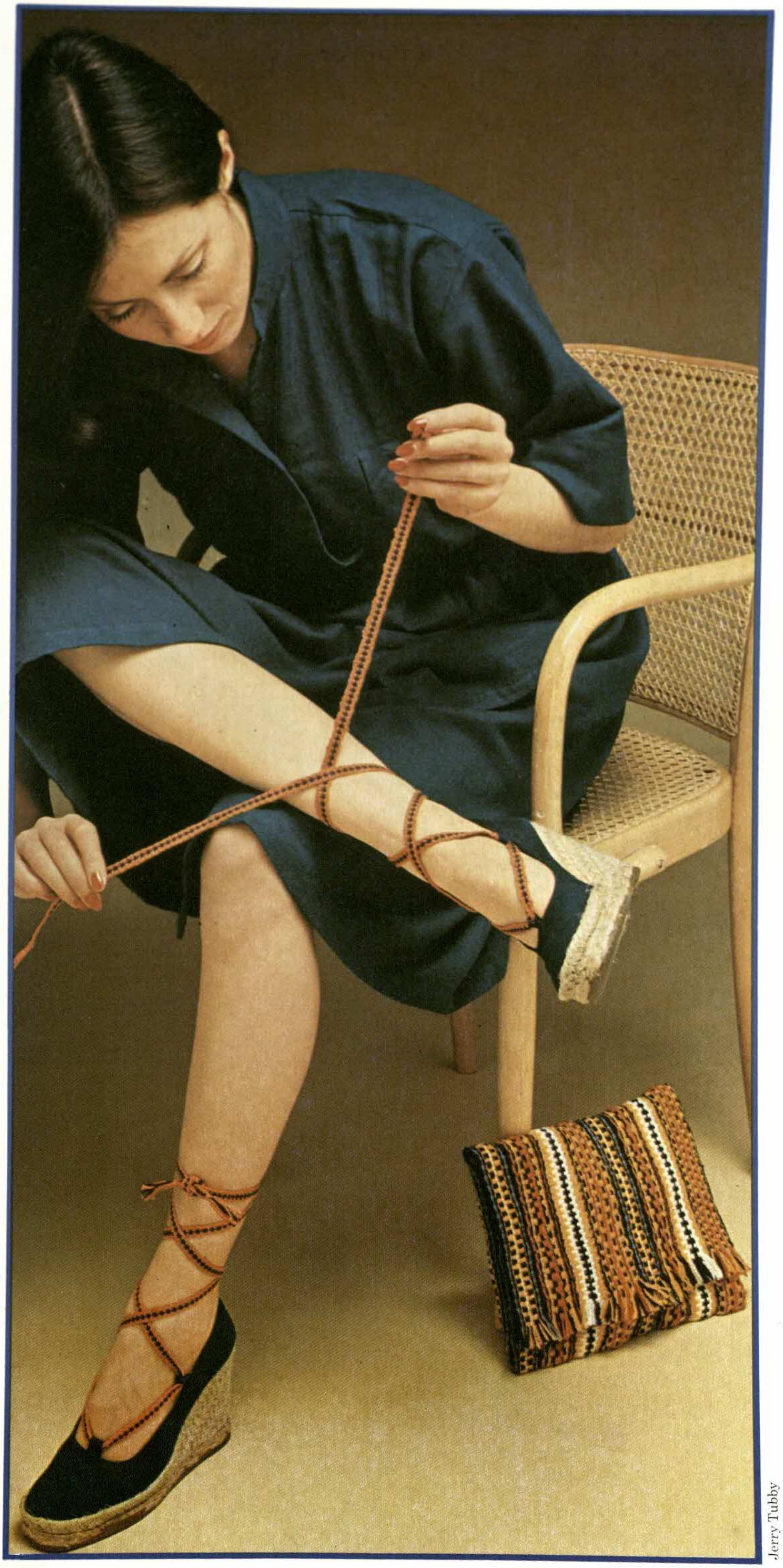
Ideas for braids. Even though 10cm (4″) is about the widest braid that can be produced on an inkle loom, there is certainly no reason why braids cannot be sewn together to create wider fabrics. The rug illustrated was made up from twelve wide braids of related patterns and colour schemes. The bag has four braids in it. The braids were cut in half widthwise and then sewn together lengthwise.

Once you start thinking imaginatively the uses for braids are limitless.



Melvin Grey

Two of the samples worked out by the designer before commencing the rug.



Jerry Tubby

Inkle fashions. A clutch bag made up out of eight inkle strips and fine cotton braids as espadrille straps. Designed by Diana Walls.

Varying patterns

Never be afraid to experiment with your braids, for, as with all weaving, there are really no limitations.

Tubular weave. To create a tubular effect (fig.1) weave the band using the normal two sheds but always place the weft in the shed from the same side and pull it tightly. Do not work too close to the leashes.

Picot looped edges (fig.2) can be woven by using two wefts—a thick and a thin one—simultaneously. The thick thread forms the loop while the fine thread is woven plain to pull in the selvedge and to keep the braid firm.

A curved end (fig.3) can be formed by pulling the end warp threads after the braid has been taken off the loom.

The Ghiordes knot (see Weaving chapter 11, page 856) can be introduced into the warp for extra texture. Always strengthen the braid with a few picks of plain weave between rows of knots.

1. This is a variation of one of the braids shown in Weaving chapter 15, page 1356. The top part of the braid is woven normally using 2-ply worsted yarn.

The tubular part of the braid is created very simply by weaving each pick from the same direction. The first weft pick is entered from either the left or right side and then taken back underneath the weaving to the side you started. Pull tightly and weave the next pick from the same direction. This process naturally pulls the braid into a tube. You can return to normal plain weave at any time.

2. This braid shows a very simple pattern of alternate bars of colour that has been transformed by using a double weft for a picot effect. Use red mercerized cotton with a count of 12s/2 and white cotton with a count of 4s/4 for the warp. If woven plain with the red mercerized cotton as weft, you will create a braid with alternate bars.

To create the looped edge, use two wefts in the same shed—mercerized cotton and 2-ply worsted. Pull the braid tightly with the cotton but leave large loops of the wool. The cotton will keep the braid firm.

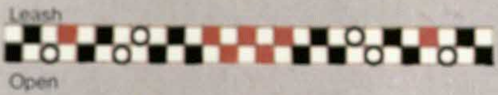
Pick-up designs

The simplest method of adding extra interest to a design is to make some of the weft thread show in the actual pattern. This is done by forming a gap in the lower shed threads where the weft will be exposed.

To do this you have to pick up the relevant lower threads and incorporate them in the upper shed. This will have the effect of allowing the weft colour to show in the reverse of the braid and

3. Twenty warp ends of four closely related colours are used for this braid. The yarn is 2-ply worsted and maroon is used for the weft. Spots at the edges are not so much of a problem when the warp and weft threads are all within the same colour range.

The curve of the braid is made after the weaving is taken off the loom. This is done by pulling on the warp ends so that the braid is pulled out of shape. The ends on the inside of the curve are pulled down harder than the ones towards the outside of the curve. Darn in the weft securely before pulling ends.



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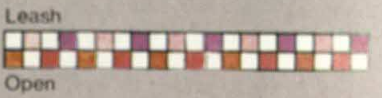

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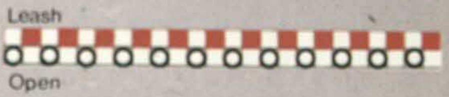

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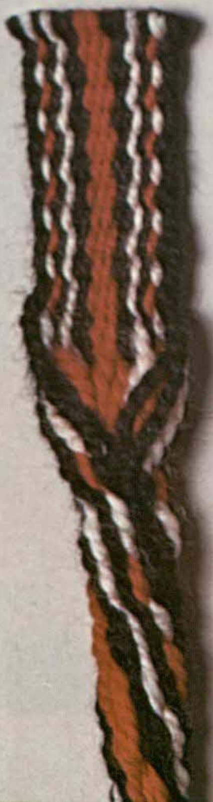

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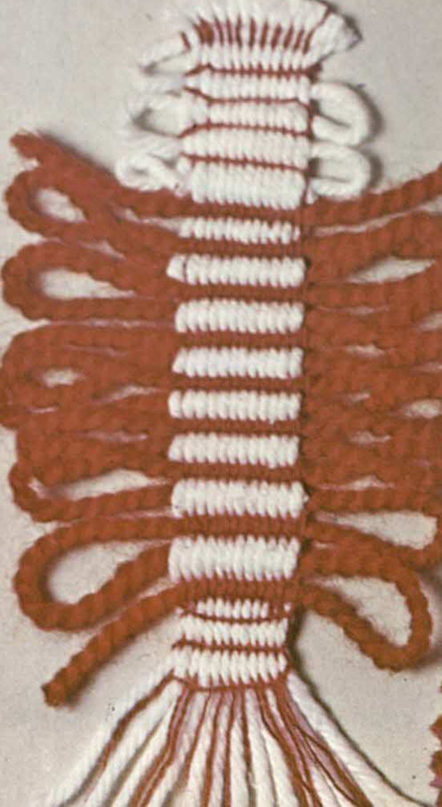

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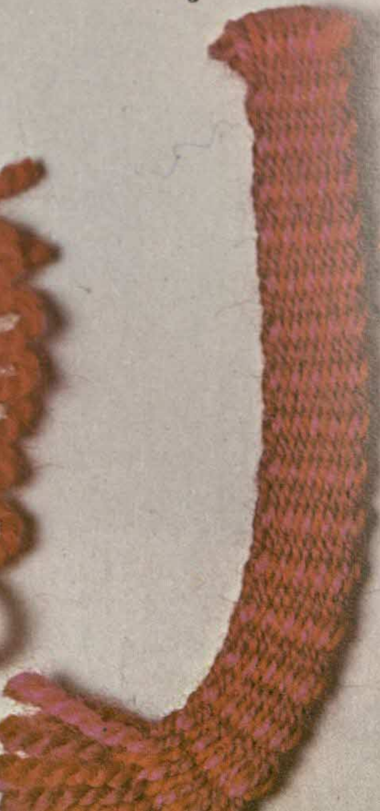


to introduce the lower shed colour out of sequence on the right side of braid. This can be done in a regular pattern (fig.4) or in a shape (fig.5).

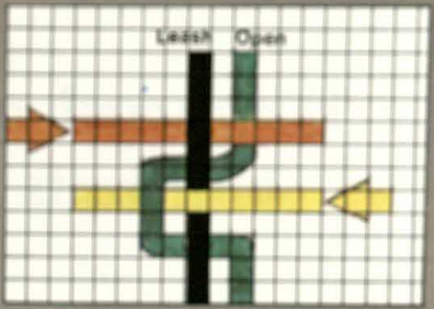
Twisted warp

Another technique that can be used to vary your braids is to twist the warp. The texture and pattern of a braid can alter radically if a twist is introduced into the warp threads (fig.6).

When the open threads are up, twist the right-hand open thread under the left-hand leash thread and pick up the open thread on the other side (fig.7). Continue in this manner all the way across the warp for that pick.

Weave the return pick normally.

Weave the next pick and every alternate pick using the twisting technique.



7. To add interest to a braid, twist the right hand open thread under the left hand leash thread and weave a pick.

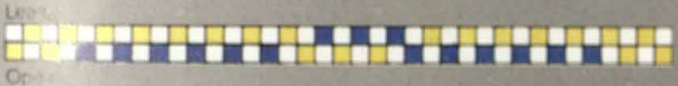
4. A braid with pick-up patterning. Blue and yellow cotton with a count of 12s/4 is used for the warp but a white cotton with a count of 4s/4 is used for the weft. This produces white spots on the edges of the braid.

The top part of the braid uses the pick-up technique to introduce the white weft into the main body of the braid. The three centre yellow threads that appear in the open line of the chart are picked up and woven with the leash threads in a regular pattern. The reverse side of the braid shows the three threads floating on the surface.

5. Pick-up techniques can be used to form motifs in braids as well as regular patterns. This braid uses a warp of very thick black cotton with fine white cotton. Woven normally and using the white cotton as weft will give you a pattern of thick and thin alternate bars. By picking up the black open threads and introducing them into the white leash threads, shapes can be made. Because the black cotton is so thick it completely obscures the white leash threads giving a raised motif. Before weaving a shape, work out on paper which threads you will pick up in each row.

6. These two braids are woven using exactly the same 2-ply worsted yarn and with the same warp chart. The variation is formed by introducing a twist into the warp of the right-hand braid.

The braid on the left is woven normally using a dark blue weft. The right-hand braid is woven using the twisted warp technique described above. By twisting the warp ends on every other weft pick, the straight lines become wriggly lines. This is a particularly good technique for subtly altering the patterning on a long braid. Sections can be woven alternatively plain and twisted.



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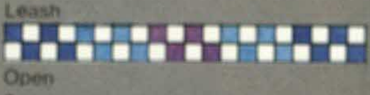

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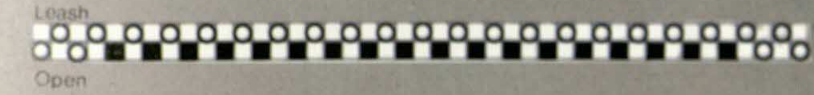

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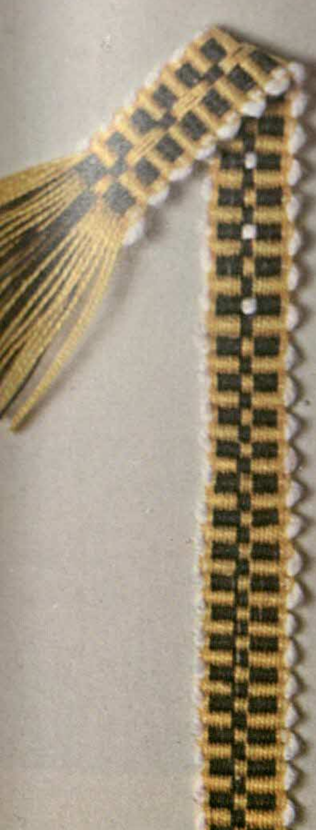
Trevor Lawrence



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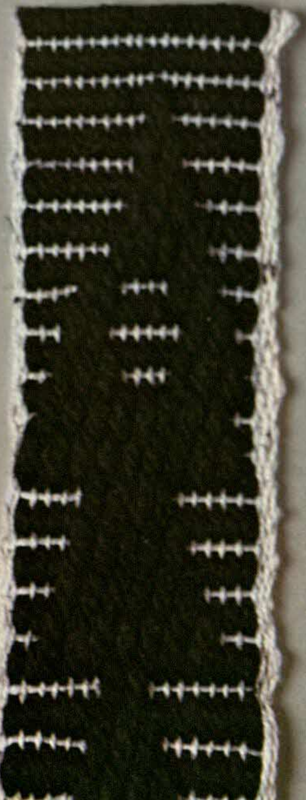

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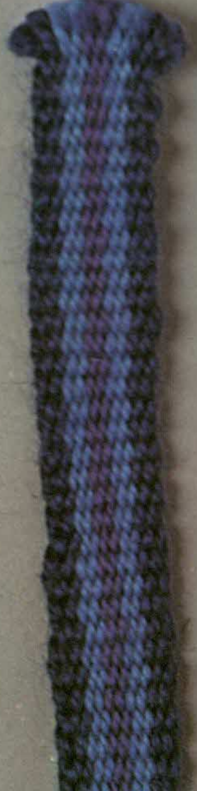

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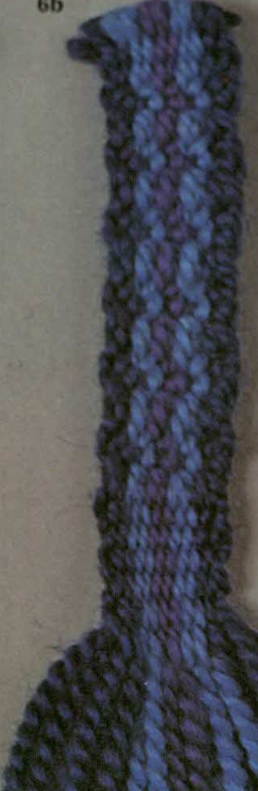
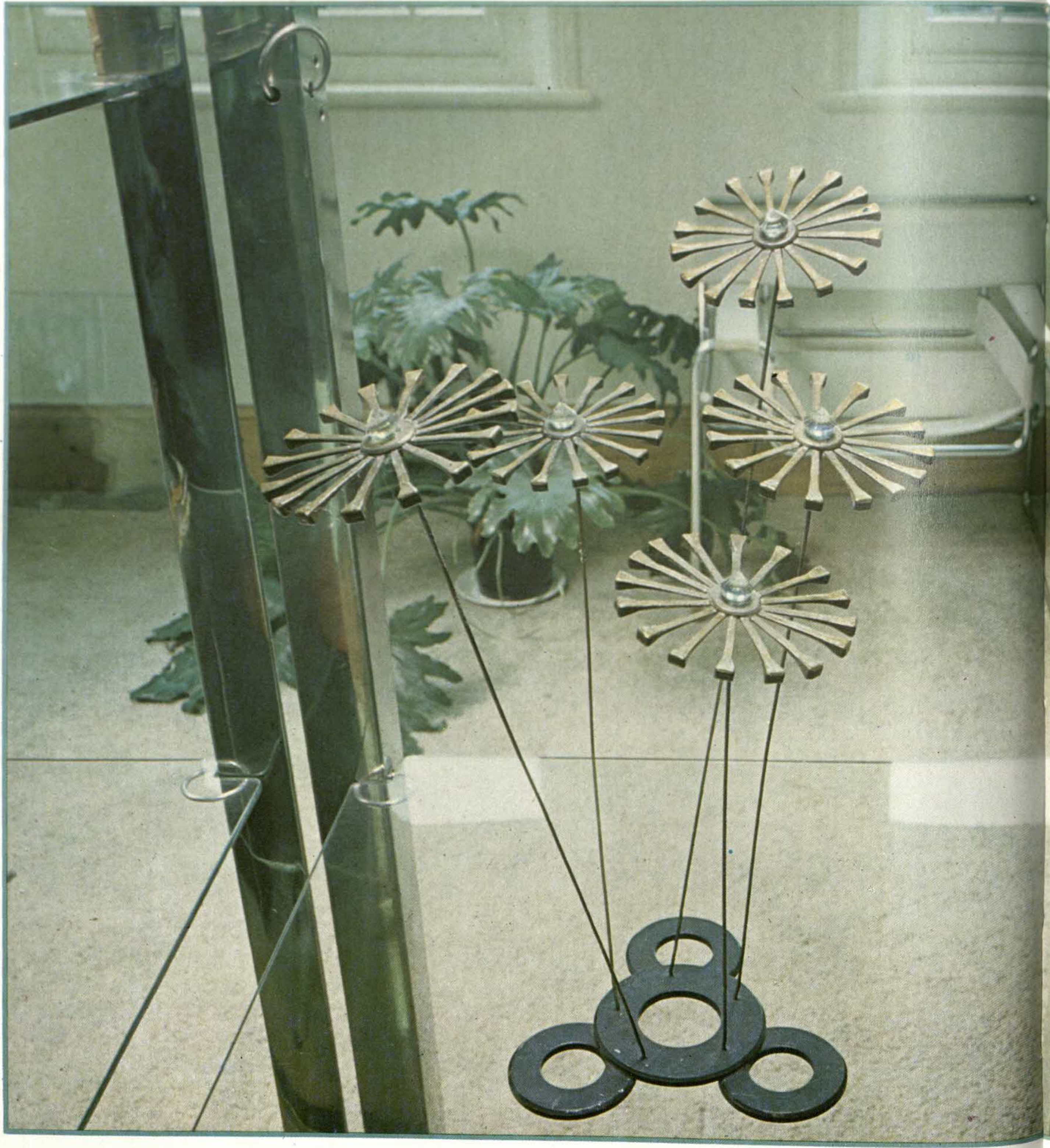


David Levin/Braids designed by Hetty Wickers

Wire, washers and nails

Metal 18

Soldering allows you to join two or more pieces of metal together. Most metals are suitable except aluminium. Avoid precious metals initially: they are no more difficult to solder than bits of scrap wire or tin cans but they are more expensive and therefore are not as easily discarded if things do go wrong. To familiarize yourself with the technique and also to enable you to do neat joins, begin work with the



Geoffrey Frosh

cheaper metals. Try making designs where lumps of solder will not necessarily distract from the overall appearance—let the solder form part of the decoration.

Collecting scraps

Buying small pieces of sheet metal and wire is not always easy as shops tend to sell metal in sheets and wire in coils—rather large quantities for the home craftsman or woman. Do not let this deter you—there is still a vast quantity of available materials which need not be bought in bulk.

Horseshoe nails, washers and wire are combined to make this sculpture. Designed by Bernard Ball.

It is a good idea to have a box or bin in which to collect bits of metal. Nails, screws, washers, horseshoe nails and so on can be used creatively whether for jewelry or abstract metal sculptures. Spokes from old bicycle wheels and wire coat-hangers are especially useful. Collect any bits of scrap metal you might find lying around. Scrapyards are another good source for materials. They are often the best place to look for a specific piece of metal as you do not have to buy in large quantities. Do not be deterred by the colour of the metal. It does not matter if it is tarnished as this is easy to clean, but avoid metal which is flaked with rust. Test a piece of metal by cleaning it with steel wool and metal polish to see if the surface is suitable for whatever you have in mind.

Jump rings and chains

If the design requires jump rings (Metal chapter 1, page 24) or a chain, the links can be soldered together. Solder the two ends of a jump ring together and when the solder is cool use a small metal file to tidy the join. Insert another jump ring into the soldered link and once again solder the two ends together and tidy the join with a file.

Continue like this until the chain is the length you require. Small jump rings are best soldered with a small soldering iron. If you use a blowtorch adjust the inner flame to the smallest possible size and only heat the jump rings around the open end.

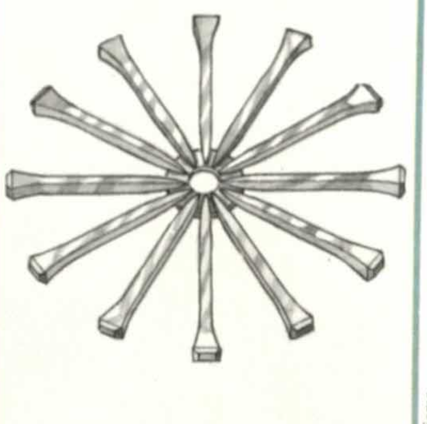
Chains made with jump rings are fairly chunky and can be combined with pieces of metal to make heavy jewelry such as pendants—horseshoe nails are especially suitable.

Horseshoe nails

Attractive jewelry can be made using horseshoe nails and wire (Metal chapter 11, page 736). Instead of holding the nails together with wire, the nails can be soldered. If you are using a blowtorch the nails can be heated with the flame to make the bending and curling easier. For details of soldering tools, equipment and techniques see Metal chapter 15, page 1130.

Washers can be combined with nails and lengths of wire to make a variety of designs. Use a washer as a centre piece and add horseshoe nails (screws or ordinary nails will also do) to form 'petals' for a flower-like design (fig.1). This can be adapted as a brooch by attaching a jeweller's finding to the back, or a pendant, or several can be mounted on to lengths of wire to form a metal sculpture. The loose ends of the wire are inserted into a wooden base to keep the flowers upright.

Making up designs. When working with wire and nails always prepare a full-sized drawing and bend the nails and wire as required. Assemble the pieces of metal on the design and make sure that the necessary contact is made to solder them together.



1. *The number of horseshoe nails used can be varied.*

Paul Williams

Trembling flowers

The metal flower can be adapted to a brooch, pendant, or a number of flowers can be used to make a metal sculpture. The sculpture illustrated is assembled and brazed on to steel washers (brazing is described in a later chapter). The flowers can equally well be mounted on to a wooden base—see instructions below.

You will need:

Horseshoe nails—the number depends on how they are arranged on the washer. They can be the same size or you can alternate larger and smaller sizes.

2 washers with 18mm-25mm (¾″-1″) diameter.

Jeweller's finding for a brooch, or jump ring for a pendant, or length of wire on which to mount the flower for the sculpture. The wire can be cut from a wire coat-hanger.

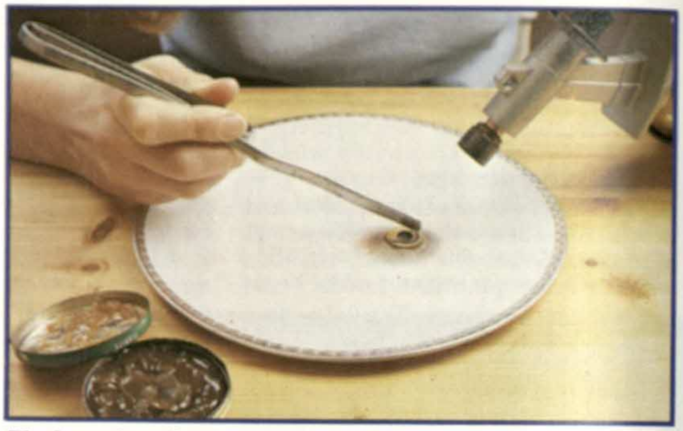
Wooden base for sculpture—the size of the base depends on the number of flowers you assemble on it. (Drill small holes in the base to house the wire or hit a small nail into the wood and then remove it to make the necessary holes.)

Tools and equipment—see Metal chapter 15, page 1130.

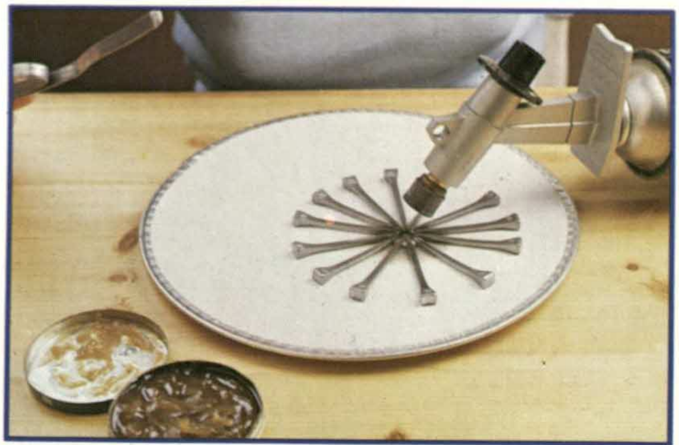
Glass beads (optional) and glue.

☐ Assemble the nails on a washer in the pattern desired.

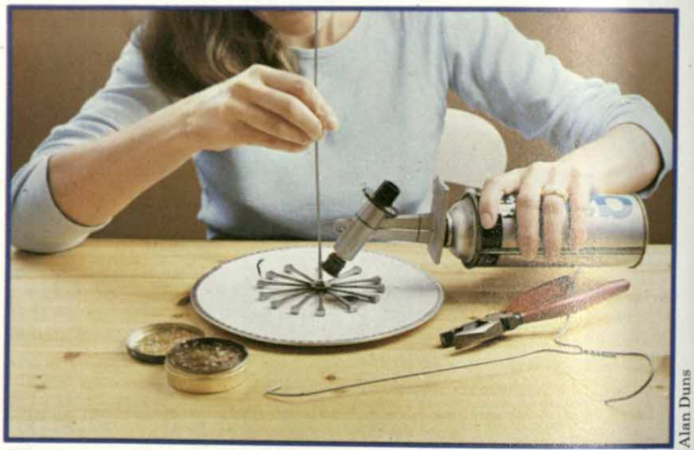
The washers and nails are cleaned before soldering.



The heated washer is tinned with solder.



Nails placed on tinned washer are sweated together.



The loop on the wire is soldered to back of flower.

Alan Duns

☐ Clean the washer and nails to remove all traces of grease, rust and dirt from the parts to be soldered.

☐ Tin one side of the washer.

Tinning is done by applying flux to the metal surface. The surface is then covered with molten solder.

☐ Re-assemble the nails on the tinned surface of the washer.

Sweat the assembly together. This is done by applying heat (a blowtorch is more suitable than a soldering iron) to melt the tinned surface. This will join the nails to the washer. Use more solder if necessary.

☐ Leave to cool.

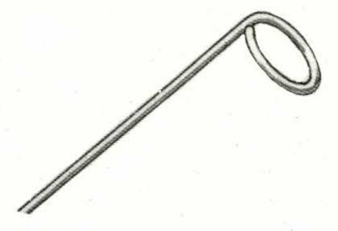
☐ Turn the washer over and solder a brooch pin to the back or solder a jump ring to the end of a nail for a pendant.

For the sculpture you need to solder a length of coat-hanger wire to the washer.

Soldering the back of the washer can cause difficulties. Heat applied to the back of the washer will cause the solder on the other side to melt which means that the nails will fall away from the washer. This is overcome by placing the nails facing downwards on a flat surface so that if the solder does melt, the nails will not move and will remain in position once the solder on both sides cools. Prop the assembly on a metal washer, if necessary, to keep it flat and if the washer sticks to the nails after soldering leave it intact on the facing surface. The soldering iron (or blowtorch with copper bit added) is more suitable for this as it spreads less heat.

Every time solder is melted and allowed to cool the temperature required to re-melt it is slightly higher. This means that once the front of the washer has been soldered it will need a higher temperature to re-melt it which also helps to prevent the front from falling away while the back is being soldered.

☐ To solder a piece of wire to the back of the washer bend the end of the wire into a loop (fig.2).



2. *Strip of wire cut from wire coat-hanger shaped to form the stem.*

Paul Williams

☐ Solder the loop to the washer and push the other end of the wire into a hole in the wooden base after all the bits of solder have been cleaned.

☐ Glue beads in position.

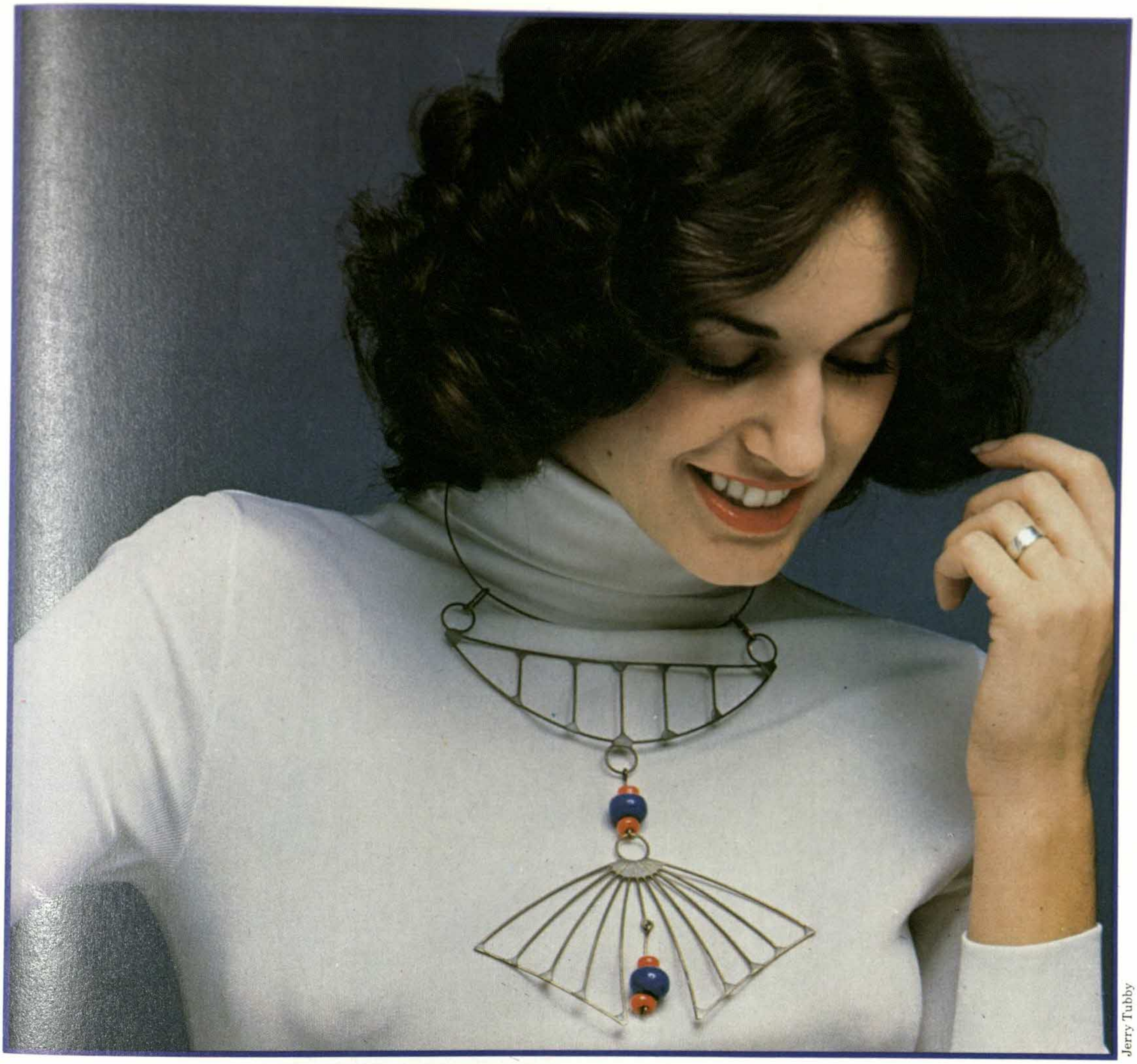
Cleaning is very important and will take as much time, if not more, than the actual soldering process. For a professional appearance always remove excess solder (with a file if necessary) so that the joins are neat. Rub surfaces with fine steel wool and use metal polish for a shiny finish.

Alternative designs

The napkin ring is made from strips of wire cut from wire coat-hangers. The strips are soldered to a piece of tin shaped into a hexagon.

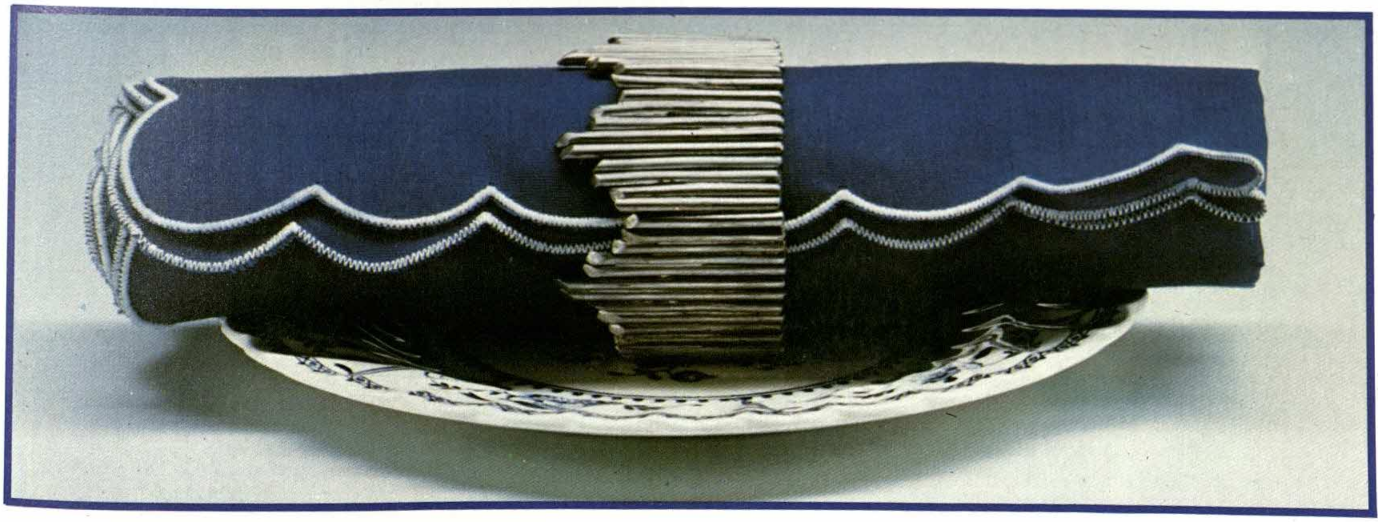
Cut a strip of tin from a suitable tin can. Remove label and clean the surface. Shape the strip of tin with a pair of pliers and solder the two ends together. Solder lengths of wire to the strip. When soldering the wire around the soldered ends of the tin, hold the assembly together with a pair of pliers until it is cool otherwise the tin strip will come apart along its seam.

The necklace is made from wire, and is a fine example of using the solder itself to decorate an item. The solder is applied liberally and then filed to shape afterwards.



Jerry Tubby

Above: soldered necklace made from wire. Below: napkin ring made from wire coat-hanger and a tin can.



Mike van der Vörd

Bead jewelry with wire

Beadwork 8

A variety of bead jewelry can be made using these basic materials: binding wire, backing plates, round-nosed pliers and gilt pins.

Dick Miller

Although many beads are worked on string a surprising amount of bead jewelry is made using metal pins or wire, and once the basic principles of wire jewelry are understood, necklaces, bracelets, earrings and brooches of apparently complicated natures become as easy to work as the simplest design. Furthermore, old jewelry can be re-styled or repaired and experiments with the permutations of colours and designs undertaken with confidence.

Old and new beads, pearls, cut glass beads and Victorian odds and ends can all be worked into new designs by linking them on to gilt chains or attaching them to metal brooches and earring backings.

Essential materials

A pair of round-nosed pliers is the most essential tool for working wire and can be bought at local hardware shops. Some pliers will cut and bend metal — if yours do not, use wire cutters, too.

The gilt pins, fine silver wire and metal jewelry backings shown are the basic materials for this kind of beadwork. The pins are 5cm (2″) long and are used to attach beads to a chain or to make a linked chain of beads. The wire is used to attach beads to metal backings and any fine wire such as fuse wire or floral wire is suitable. Gilt pins and backings are available from some craft suppliers or bead specialist shops.

Applying beads to chains

The chunky necklace and bracelet in the photograph look elaborate but are really very simple to make and can be assembled from the kind of beads shown or from beads of your own choice.

For the bracelet you will need:

19cm (7½″) of gilt chain with links about 6mm (¼″) long.

54 beads, including 4 x 16mm (⅝″), 10 x 6mm (¼″) and 40 in-between sizes.

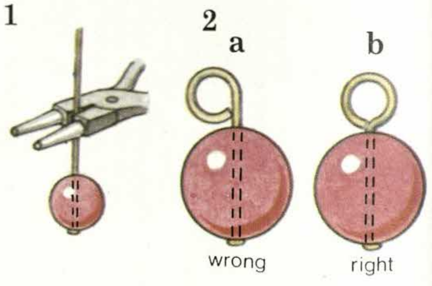
54 gilt pins.

Round-nosed pliers, wire cutters.

Bolt ring clasp.

Tape measure or ruler.

☐ Put a gilt pin through one of the largest beads and cut off all but 1.2cm (½″) of the protruding end (fig.1).



Paul Williams

1. *Thread bead on to gilt pin and cut off excess wire.* 2. *Bend pin into loop.*

☐ Bend the remaining end, using the pliers, into a loop to make a neat 'O'. When you do this try to bend the wire a little in the opposite direction from the way the loop is to go so the bead will hang properly and you will obtain a more professional finish (see figs.2a and b).

☐ Repeat this with the three other large beads and space them along the chain so that the first one is about 2.5cm (1") from the end of the chain.

☐ Now open the loops with the pliers, slip them on to the chain links and close them up again.

☐ Do this with the 10 smallest beads, putting the first one on the second link from one end. It is important that all the beads are on the same side of the chain so that they hang properly when worn. When two or more beads are put on one link they can be attached to either the top or the bottom of the link.

☐ Repeat the process with all the beads, putting one on each link, then filling in where colours look best. The beads should be fairly evenly spaced so there are no extra thick clusters anywhere.

☐ Fix the bolt ring on the end loop and the bracelet is complete.

For the necklace you will need:

40.5cm (16") gilt chain with links about 6mm (¼") long.
110 beads, including 5 x 14mm (⅝"), 20 x 6mm (¼"), 16 x 4.5mm (3/16") and 69 in-between sizes.
110 gilt pins.
Round-nosed pliers.
Bolt ring clasp.
Tape measure or ruler.

The necklace is made in the same way as the bracelet but the beads are graduated to give more width and importance in the front.

☐ Begin by placing one large bead in the centre of the chain.

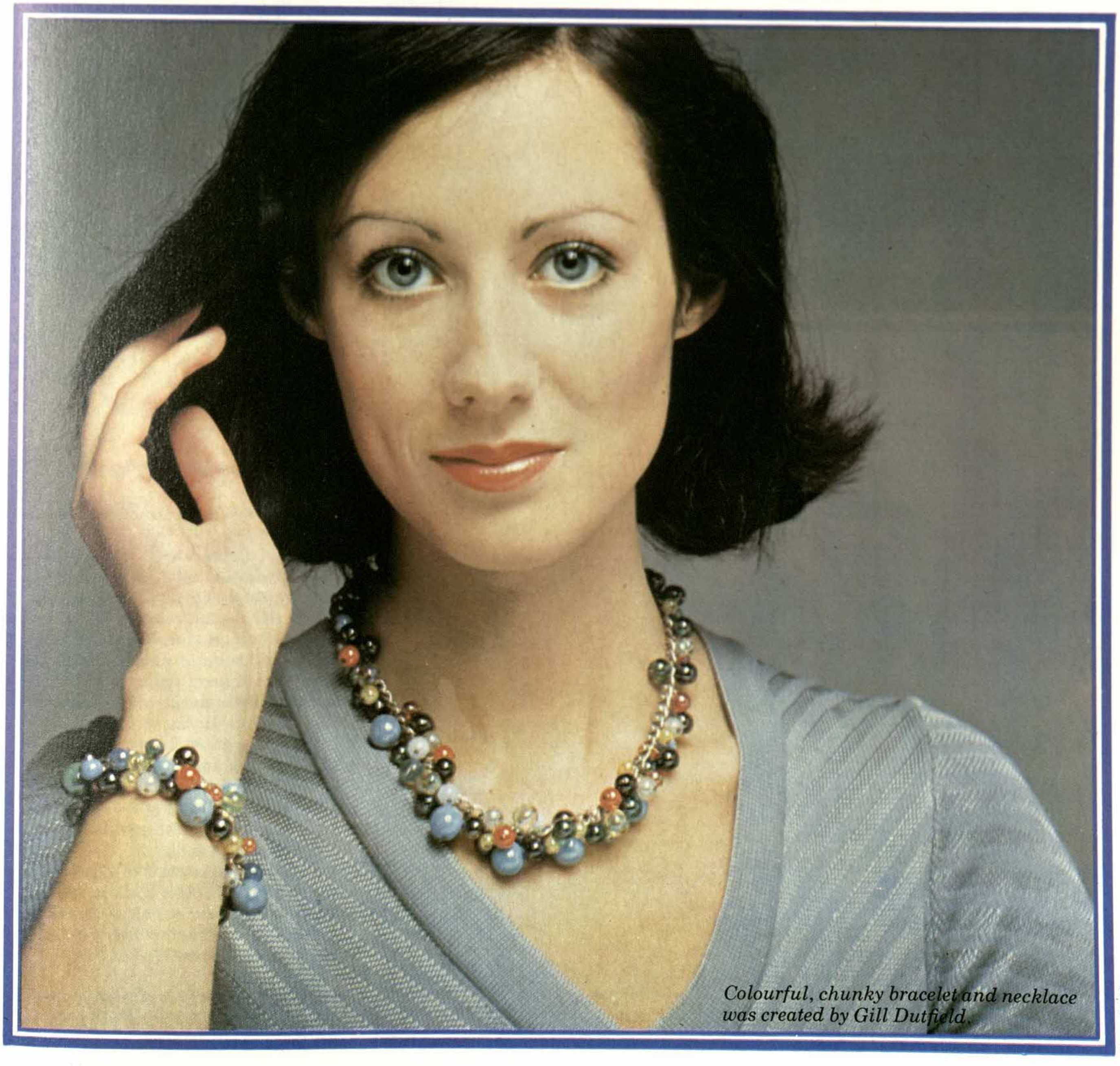
☐ Fix another large bead 2.5cm (1") from it on either side.

☐ Fix the other two large beads 4.5cm (1¾") from the last two.

☐ Now hang the smallest beads at equal intervals along the chain. This gives the basic framework of the necklace.

☐ Divide the remaining beads into thirds and use one third for the 15cm (6") at each end of the chain and the other two thirds for the remainder. This will build up the chunkiness in the front.

☐ To complete, attach clasp.



Colourful, chunky bracelet and necklace was created by Gill Dutfield.

Jerry Tubby

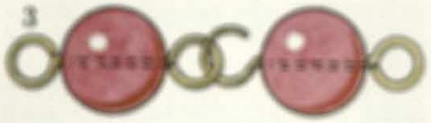
Bead ropes

The glass and wooden bead necklace is made by a simple method that can be used to make ropes of beads of any length and combination and which, unlike threaded beads, will not break in the course of normal wear if links are properly closed.

These necklaces are made entirely with gilt pins and on long ropes which fit over your head, so clasps are not needed.

To make a rope remove the head from as many gilt pins as you require and at the same time cut the pin to the length you want. This is determined by the diameter of your bead plus 6mm (¼") extensions on both ends to make connecting links (fig.3). If beads of different sizes are used then divide the pins accordingly, for it is easier to cut several at a time.

3



3. *For connecting loops, use both ends.*

Make a round loop of the same size at each end of each bead then, using your pliers to open the loop slightly at one end, attach it to the loop of another bead and continue until your rope reaches the desired length.

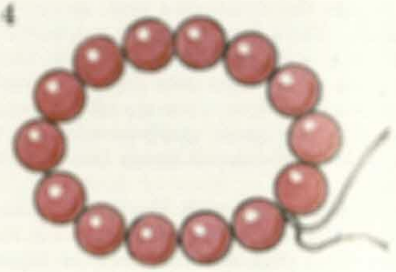
Using backing plates

Metal backing plates come in two parts; one part is covered in holes, the other has a plate to support the clasp and claws to hold the two pieces together. The two parts are joined by the claws after the beads are attached and this serves to cover up untidy wire ends and to make a functional finished object.

Mike van der Vlied

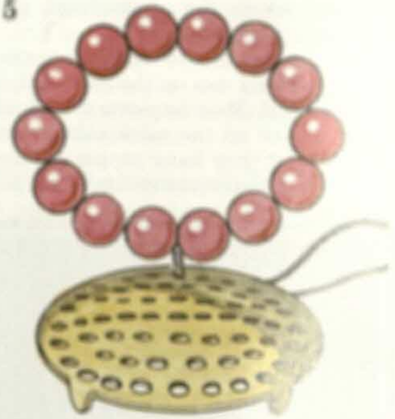
Bead ropes do not require clasps. With links made from gilt pins they are less likely to break.

4



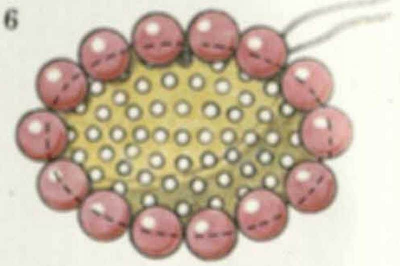
4. *String 14 beads on doubled wire.*

5



5. *Push wire through backing plate.*

6



6. *Position beaded circle on plate.*

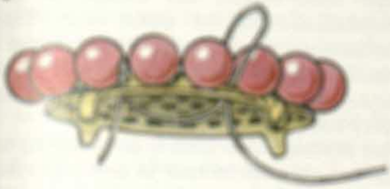
Backing plates are obtainable in various shapes and sizes and it is always necessary to plan your design so that the plate is completely covered in beads, which should extend slightly over the plate edge. Beads are attached with gilt pins or with wire which is threaded through the plate holes.

For the brooch you will need:

Roll of fine wire such as fuse wire or floral binding wire.
Round-nosed pliers.
Three gilt pins.
Oval backing plate 3cm (1¼") long.
38 x 5mm ($\frac{5}{16}$") beads.

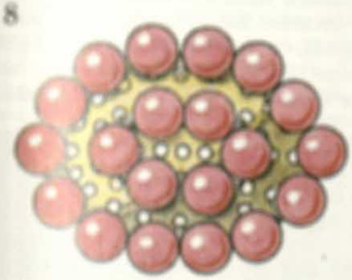
☐ Cut off 40.5cm (16") of fine wire and fold it double so that you are using two thicknesses. Twist the loose ends together so that they will go through the holes in the beads.

7



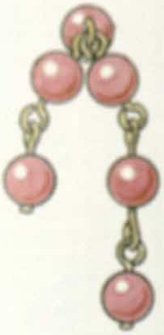
7. Secure beads to plate with wire.

8



8. Position inner circle next.

9



9. Drop lengths are linked with pins.

Paul Williams

☐ Thread 14 beads on to this double wire so that they are roughly in the centre, then secure them by twisting the two ends of wire together to close the circle (fig.4). Do not trim.

☐ Take the front half of the backing plate and, convex side up, insert the wire into a hole on outer edge (fig.5). Then arrange the bead circle on the plate so that the beads slightly overlap the plate edge (fig.6).

☐ Holding beads and plate in one hand, count four holes; thread one wire up through the fourth hole in the outer edge, bring it over the bead circle and back down through the same hole (fig.7). Pull tightly and the wire will slip between two beads and help secure the circle to the plate.

☐ Repeat this at equal intervals round the circle, then twist the remaining wire together and cut off surplus.

Mike van der Vord

Brooch and earrings, like all jewelry shown, is by Jill Dutfield.

☐ To make inner circle use 6 beads and a 25cm (10") piece of wire folded double. Proceed to make an inner circle (fig.8) in the same manner as before except this time secure the beads to the plate by threading wire in between every other bead, instead of every fourth one.

☐ The third circle has 12 beads strung on 50cm (20") of doubled wire. Place it in the gap between the other two circles (it will protrude somewhat) and push the wire through a hole below. It is rather more difficult to attach this circle and you must take care not to pull too tightly as you hook the wire between the beads or they will sit unevenly. It doesn't matter if the wire does not go back through the same hole as long as it goes through the next one (as the plate gets crowded with beads it becomes more difficult to be accurate).

☐ The centre can be made with just one round bead mounted with a gilt pin or with two drop lengths as shown.

To mount one bead using a gilt pin, secure it to the backing with a loop as in fig.2, then flatten the loop against the backing.

☐ To make drop lengths the pin must go in the reverse way and the loop be made in front of the bead. This way other beads can be added by linking (fig.9).

☐ The drops shown are of uneven lengths. Attach beads with two links (fig.3) and add two beads to one chain and three to the other. This completes the drop lengths.

☐ Fix the brooch to the other half of the plate by putting the two parts together and pressing the claws down firmly with the pliers.

The matching earrings are made in exactly the same way but with one circle of 6 beads plus a centre bead. Use a smaller backing plate, 5mm ($\frac{1}{5}$") in diameter. The beads are threaded on to a 30cm (12") length of wire bent double.

Dick Miller

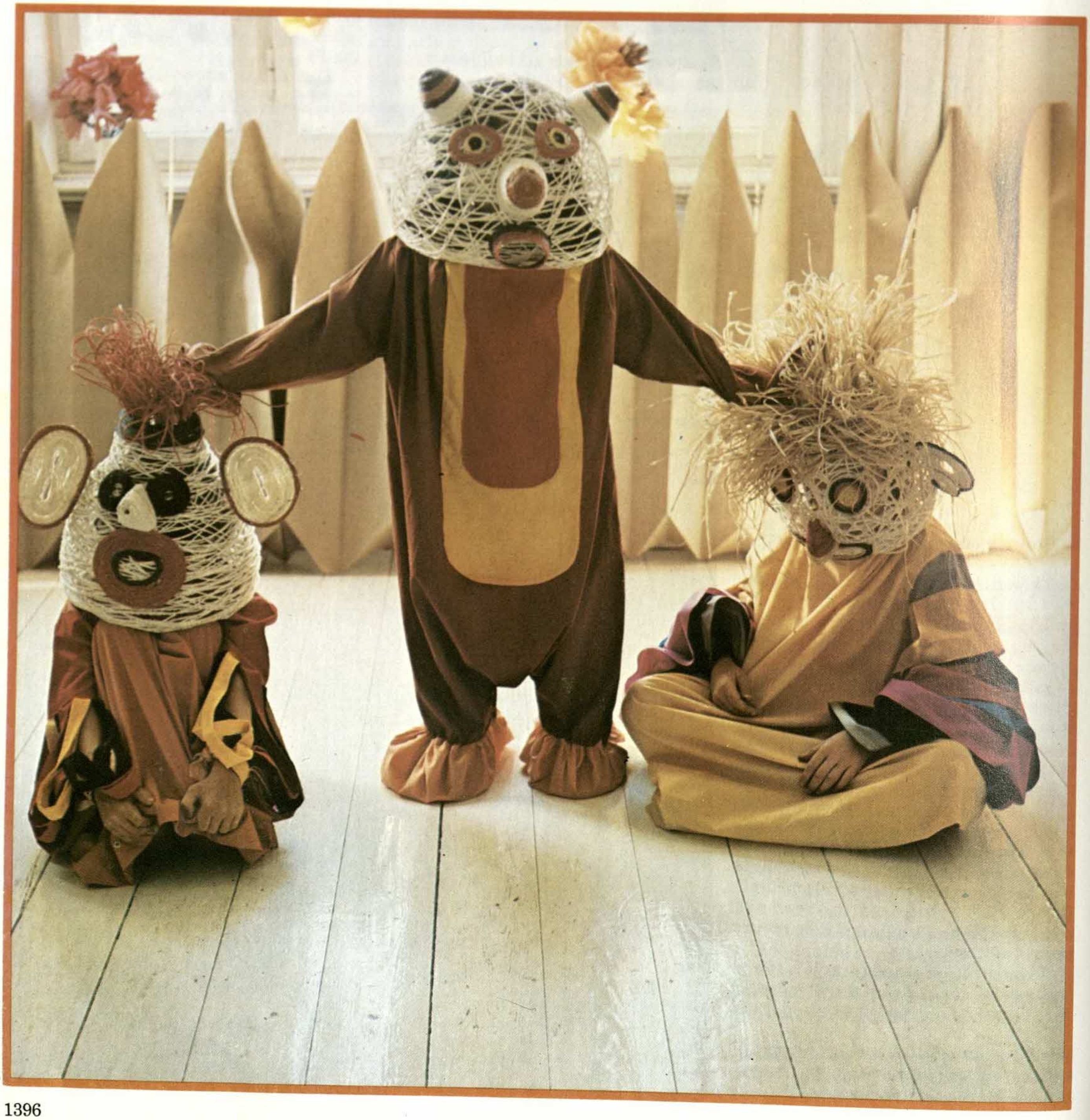
Beads are attached to backing plates with wire or gilt pins which are threaded through holes in the plate.

'String mâché' techniques

Yarn — ropework 3

Winding rope around a solid foundation is the simplest technique in ropework (see Ropework chapter 2 page 1350). An unusual development of this is to use string, paint over it with adhesive and remove the foundation when the adhesive is dry. The process has many similarities to papier mâché and, if enough glue has been used, the rope will retain the shape of the foundation and be quite stiff. This technique can be used for children's masks, lampshades, and any type of container which is not intended to carry much weight.

The string. The best type of string to use for this technique is two-ply sisal because it absorbs the adhesive well and can be wrapped round the foundation enough times to give strength to the finished item but still leave some space between the strands. This forms an attractive pattern and allows light to shine through a lampshade, or allows wearer to see through a mask.



Camera Press

String masks

String masks are fun to make and when finished they are surprisingly durable. They do, however, require an imaginative design and a lot of patience and care in making-up.

It is easiest if two people work on the mask together because it is then not so difficult to control the string. A child and an adult make a good combination, with the child's small fingers holding the string while the adult pins it.

The foundation. For a fairly small child—a four- to six-year old, for example—a plastic bucket makes an ideal foundation for the mask. Try on the bucket for size before you start work—it should be quite a loose fit because the string tends to shrink when the adhesive is applied. For an older child you could use an up-turned bowl, providing it is deep enough to cover the face.

Remember that whatever you do use, you must be able to pull it out easily when the mask is made, so the part of the foundation round which the base of the mask will be worked must be the largest part.

The design. The shape of the mask will probably be bucket shaped or round since it is these shapes which form the most suitable foundations. You will be able to form the character of the mask with different and exciting features. It is worth drawing some sketches with crayons on to paper before you begin work (children often produce some of the best designs), so you can choose the one you prefer. Remember that you cannot force the string into difficult shapes—a little experimenting and patience will show you the things that can be achieved.

You can also add individuality to the features by dyeing the string with instant dye—you can dip the string into it or brush it on—or by painting it with coloured ink or food colouring.

You will need:

Foundation, such as bucket or bowl, for body of mask.
Large ball two-ply sisal string.
PVA adhesive.
Rubber-based adhesive, such as Copydex, brushes.
Dressmaker's and safety pins.
Roll of aluminium foil.
Piece of soft board or heavy card 5cm (2″) larger each way than the base of the foundation.
Materials for features (beads, buttons, colouring).
Florist's wire.
Fabric dyes or coloured inks for decorating the mask.

Make these masks for a fancy-dress party by winding string round a foundation, coating with glue and removing foundation when glue is dry.

☐ Cover the foundation and the board or card with foil and then place the foundation, base down, on to the board or card.

☐ Working straight from the ball of string, knot one end and pin it firmly into the base board at the bottom of the foundation. This is your starting point (fig.1).

☐ Take the string up and across the top of the foundation and pin it to the base board on the opposite side. Take the string approximately 7.5cm (3″) to the side along the base board, pin it, and then take it up over the foundation again. Where it crosses the previous strand, pin carefully using ordinary pins if you do not mind piercing the foundation, otherwise use safety pins.

☐ Keep winding and pinning the string over and round the foundation forming an attractive but irregular pattern (fig.2).

☐ Mix a cupful of PVA adhesive with two cupfuls of water. Brush the mixture over the mask, soaking the string well. Leave to dry—this will probably take 24 hours at average room temperature.

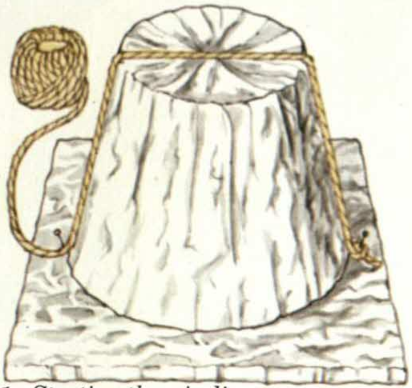
☐ When the mask is dry, remove all the pins, re-coat with the glue mixture and leave to dry again.

☐ Remove from the foundation and pull away the aluminium foil. Paint the inside of the mask with the rubber-based adhesive to add strength to the mask. This also helps to flatten the fibres of the sisal, and the rubbery surface makes the mask smooth inside. Check again that all the pins have been removed. If any pins break, remove with long-nosed pliers.

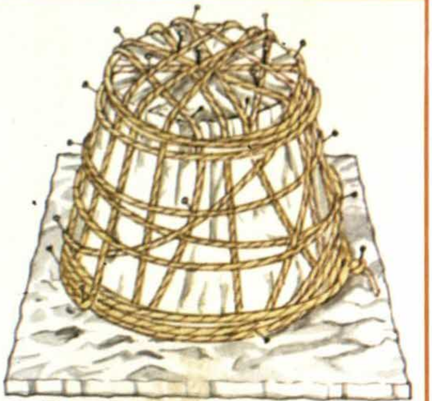
Forming the features. While you are waiting for the mask to dry you could be forming the mask's features. The eyes and mouth of the mask in the photograph overleaf were made by coiling string on to a card of the required shape as for a Flemish coil (see Ropework chapter 1, page 1018). They were then painted, allowed to dry and then coated with PVA adhesive and water mixture and left to dry again. The ears were made from dyed, plaited string and the top-knot from twisted and knotted string. The hair was made from teased-out sisal, formed by cutting several lengths of sisal about 40cm (16″) long, teasing out both ends, with a solid section of about 1.5cm (½″) in the middle (fig.3).

☐ Mark the areas of the features on the mask. Apply the rubber-based adhesive to the backs of the eyes and also to the area of the eyes on the mask. When they are dry, push the eyes on to the mask. Stick beads or buttons to the centres of the eyes to form the pupils. For the nose, make an oval coil and a small round one. Join the two coils at a 45° angle as shown in fig.4. Apply adhesive in a narrow band on the wrong side at the top of the oval and on the back edge of the round coil. Apply adhesive to the top and bottom of the nose position on the mask. Press in place as shown.

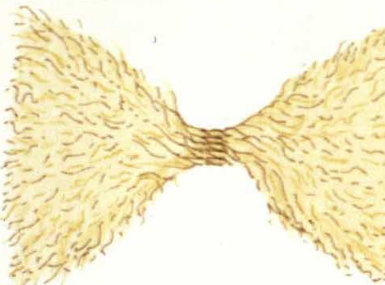
For more solid features, wind string round a small foundation, such as an egg-cup, and coat with adhesive in the same way as for the body of the mask.



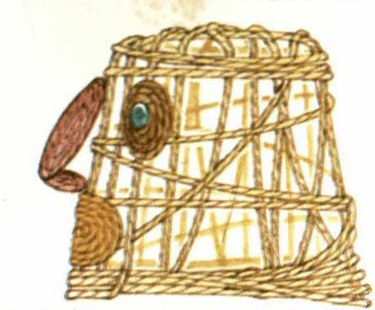
1. *Starting the winding.*



2. *Forming an irregular pattern.*



3. *Teasing out sisal for hair.*



4. *Positioning the nose.*

Paul Williams

☐ Fold the teased-out lengths of sisal in half and apply the rubber-based adhesive to the solid area. Leave to dry. Apply the adhesive to the top of the mask. When dry, press the hair on to the mask. Finish off by looping some coloured string and attaching it with florist's wire to the back of the mask.

String lampshades

You can achieve a more circular shape (where the diameter of the opening is less than the diameter of the largest part) by using the same technique, but wrapping the string round a balloon which is burst when the adhesive is dry. In this case the string is coated with a heavy-duty wallpaper adhesive which makes it very stiff—and therefore uncomfortable for a mask—but it does maintain its shape, making it suitable for a lampshade.

You will need:

Strong balloon, blown up to the size you require.

String, large ball 2-ply sisal.

Wooden ring, about 12cm (4¾″) diameter.

Heavy-duty wallpaper adhesive, made up to the manufacturer's instructions.

Bowl, brush, newspaper.

Plasticine.

Revolving cake stand (optional).

Cup hooks for hanging shade.

Brass chain (optional).

☐ Roll up the plasticine to make a circle of the same outside measurement as the ring. Place it on the cake stand or your work surface and sit the balloon tied-end down firmly on it.

☐ Cover your work surface with newspaper and pour some of the adhesive into a bowl, replenishing it as necessary as you work. Arrange the string and the balloon close together with the bowl of adhesive between them.

☐ Working from the ball of string so that you use a continuous length, soak about 3m (3yd) of string in the adhesive. When it is thoroughly wet, press the end into the plasticine and wind the wet part round the balloon in a random pattern. Keep the windings close to, but above, the plasticine ring (fig.5). (A revolving stand makes this process easier.)

☐ Continue in this way until the balloon is well covered with the string. Leave until completely dry (this may take as long as a week). Save the spare adhesive in a screw-top jar (this type of adhesive generally contains poisonous fungicide which should not be left lying around).

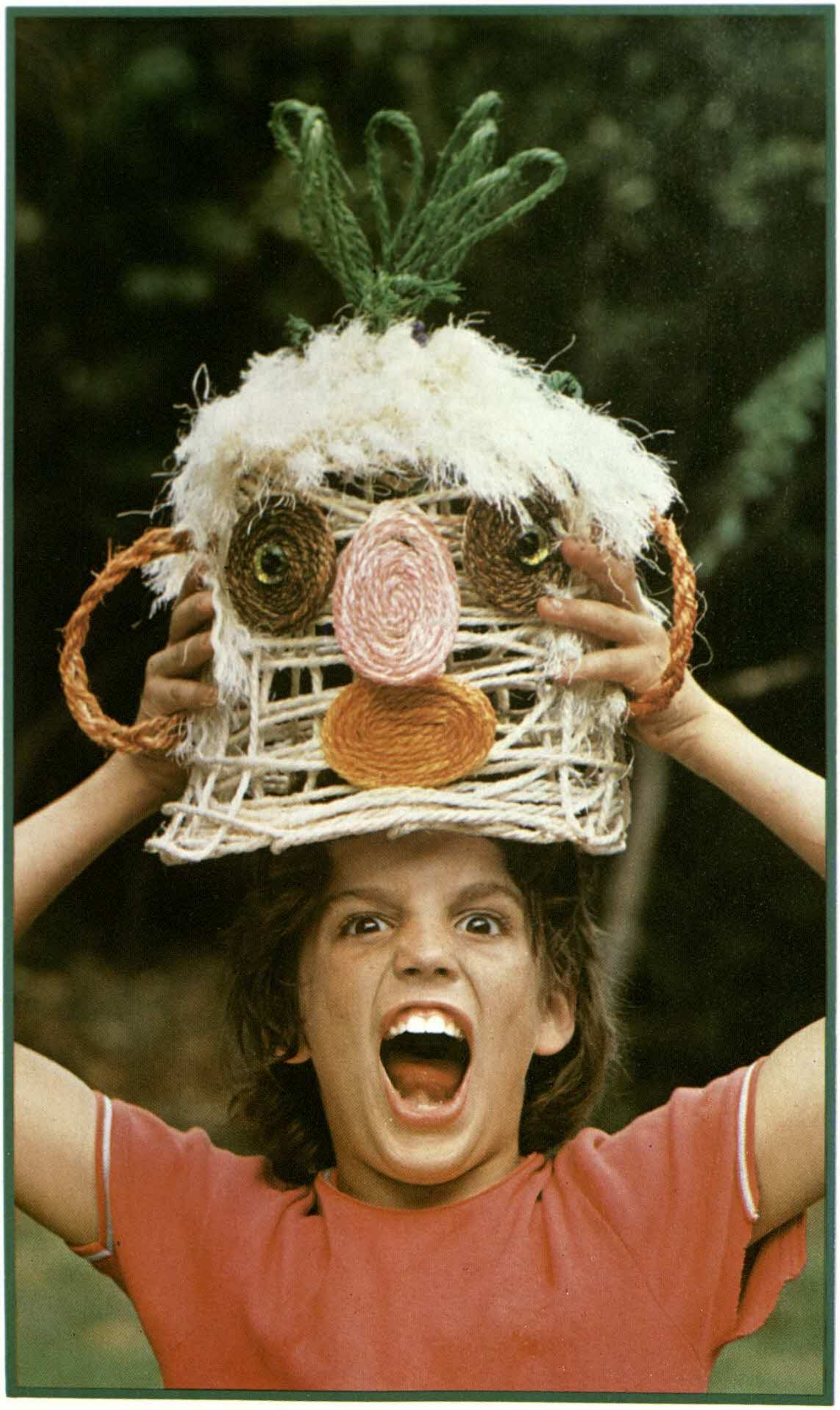
☐ Pull away the plasticine carefully. Pop the balloon and remove the pieces of rubber (fig.6). Apply more adhesive over the shape again and leave to dry.

☐ Insert the wooden ring into the opening and bind in place with string.

Fitting the shade. Screw the cup hooks into the ceiling into the joist on each side of the light fitting.

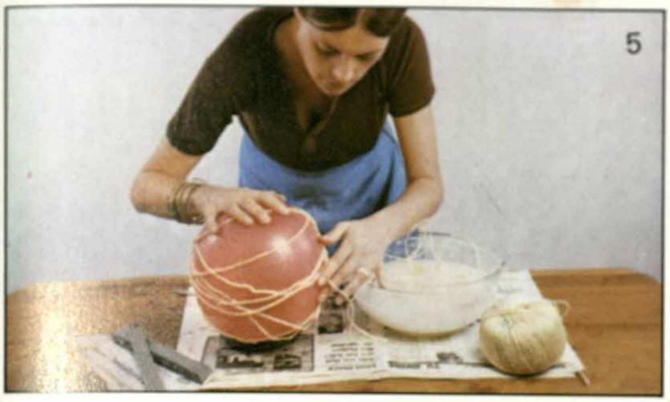
The length by which you hang the lamp from the ceiling depends both on the size of the shade and the length of the flex. Cut a length of string double the length of the flex plus about 3cm (1″) per 30cm (12″). Tie one end of string round ring and loop the other end round the ring on the opposite side.

Hang the string over the cup hooks and adjust the length as necessary until the bulb is inside the lampshade and the fitting is hidden. Take the lampshade off and cut two more lengths of string of the same length as the first one. Make a plait to the required length and tie the ends of the plait to the ring. Hang the finished shade in position. Alternatively, use lengths of brass chain as shown in the photograph.

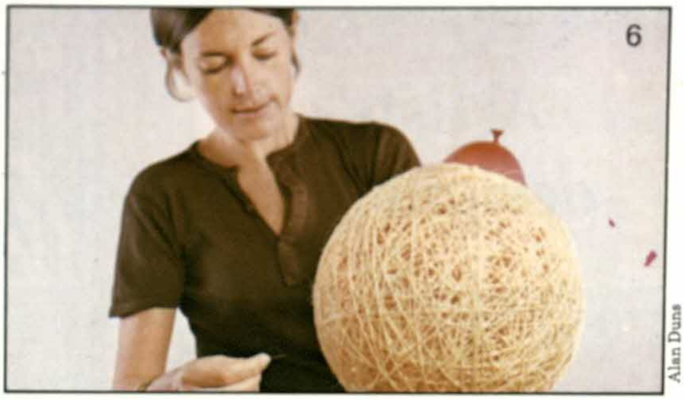


Different features give the masks their character. This mask was designed by Anne Gurney.

Jerry Tubby



5. *String, soaked in adhesive, is wound round the balloon. The windings are kept above the plasticine base.*



6. *Bursting the balloon when the string is completely dry. More adhesive is applied for extra stiffness.*

Alan Duns

The lampshade can also be used as a flower pot container. Take care when watering or the glue may dissolve!

Geoffrey Frosh

Artists' and designers' aids

Design know-how 50

As you become more experienced at your chosen craft, you will probably begin to be more adventurous in the type of design you attempt and you may even undertake some commissions. At this stage you should certainly plan your designs on paper in advance because although you may have a very clear picture of the design in your mind, the only accurate way you can convey it to someone else is by a sketch.

Even if you find it difficult to draw, there are several artist's aids which can help you. Many of these, such as a ruler, pair of compasses, protractor and set square, you may have already, but there are some other more unusual and inexpensive aids which might prove to be the answer to your problem.

Marker pens work like felt-tipped pens but have a broader softer tip so that it is easy to fill in large areas of colour smoothly and quickly. They are sold at most stationers and art shops under such names as Magic Markers or Instant Markers.

Dick Miller

Above: using a pantograph to enlarge a silhouette shape. Below: a collection of designers' aids including stencils of various shapes, marker pens, white correction fluid, and a flexicurve.

Stencils have been used for lettering for many years but they are also available in different shapes and sizes, such as ovals, arcs, and motifs for borders. To use a stencil, place the stencil card on to your paper and draw round the edge of the required cut-out shape. Stencils reproduce characters with a double outline which can be filled in with colour if you wish.

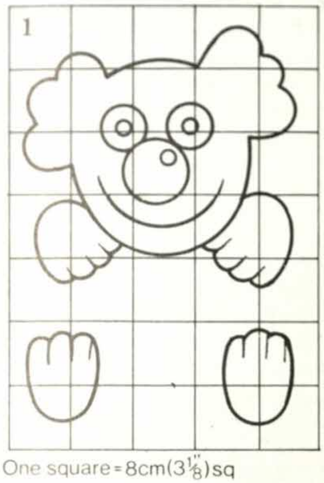
Flexicurves are ideal for drawing more unusual curving shapes. A flexicurve is a narrow strip of rubber which can be pulled and pushed into an innumerable variety of shapes. The upright edges are firm so that you can trace round accurately.

Correction fluid. This is sold for correcting typing mistakes but it is also useful for covering mistakes on white paper where a rubber eraser cannot be used. To apply it, paint over the area to be removed and allow to dry.

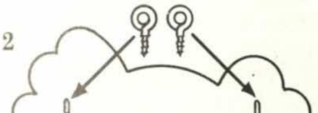
Pantographs are simple instruments for enlarging or reducing designs. When set to the required size, you trace over the original drawing and the pantograph will reproduce it simultaneously. There are various models ranging in price but unless you are going to do a lot of work with this instrument, the cheaper versions are quite satisfactory.

David Levin

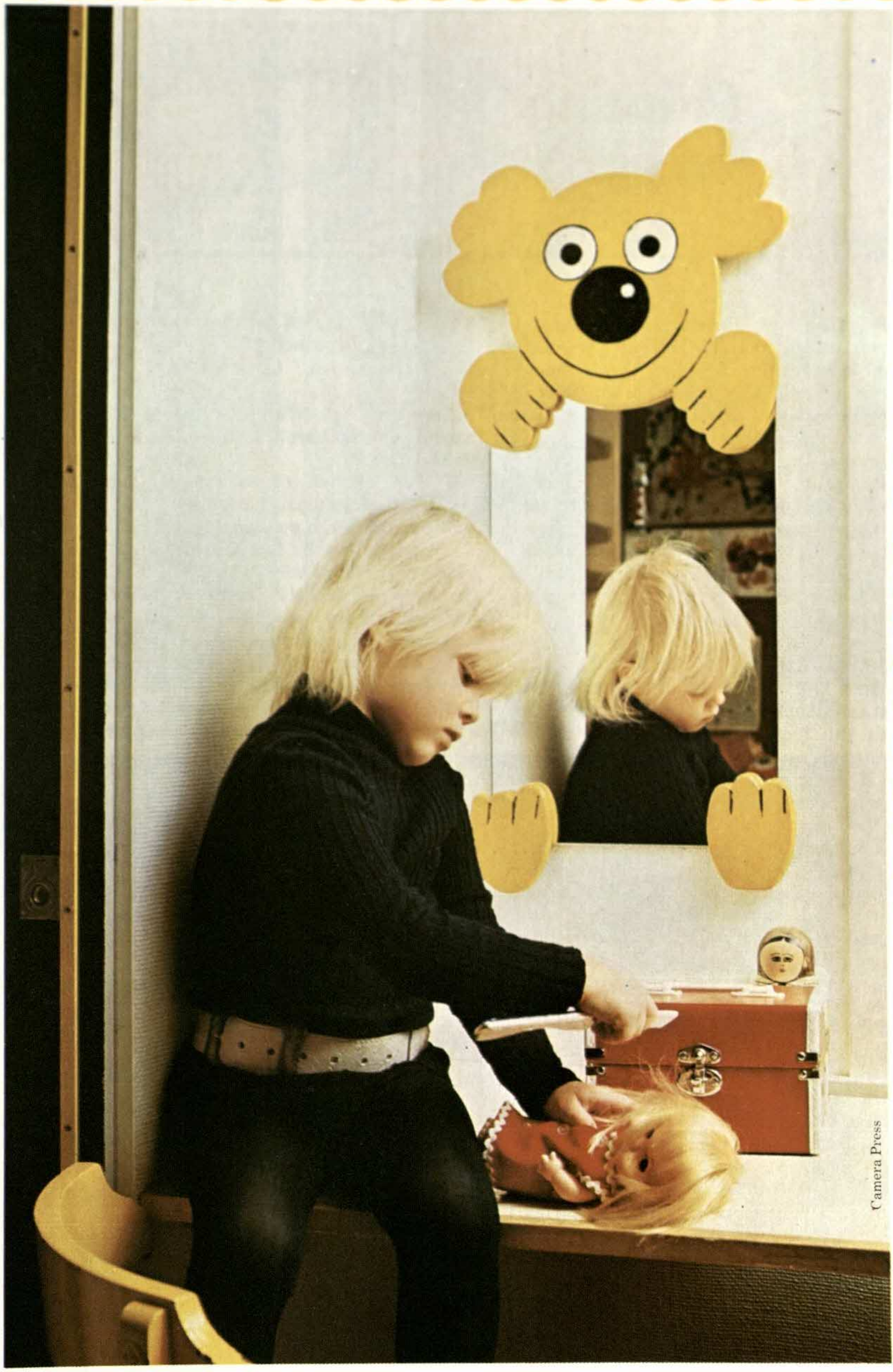
Creative ideas 50



1. *Above: teddy graph pattern.*
2. *Back view showing detail of construction.*



Paul Williams



Camera Press

Teddy Mirror

Here is a very crafty idea to encourage your child to stand still for that extra minute while you comb his hair.

You will need:

A piece of plywood 56cm x 48cm (22" x 19") x 13mm ($\frac{1}{2}$"). Coping saw.

Mirror at least 32cm (12") wide and any length desired.

2 strips wood about 5cm (2") wide and 6mm ($\frac{1}{4}$") thick and the length of the mirror plus 5cm (2").

All-purpose adhesive.

4 screws slightly longer than the combined depth of mirror and wood strip.

2 small screw eyes, picture wire and a double-x picture hanger.

Gloss paint in yellow, black and white.

Draw a pattern from the graph. Transfer to board and cut out the pieces with coping saw. For details see Wood chapter 9, page 636. Paint the right sides and edges of the pieces. Leave to dry, then paint on the face and claws.

Glue wrong side of teddy bear parts on to mirror front and leave to dry.

Screw wood strips in position on back of frame (fig.1).

Position screw eyes (fig.1) and picture wire.

Hang from a double-x picture hanger.

Painting on glass

Painting on glass is a fascinating technique and the result is quite different from painting on a matt, opaque surface: the colour has a brilliant quality, it almost seems to glow. Transparent, rather than opaque, glass paints give the best effect.

In a previous chapter (Glass chapter 3, page 370) glass paints are used to coat the surface of the glass. In this chapter the technique is extended and instructions are given for painting detailed pictures and for combining painting with a silver foil backing.

Painting front surface

Here the technique of painting with translucent and opaque glass paints on to the front surface of glass is discussed.

Choose a simple, decorative style with bold lines and colours such as 'The White Bird' illustrated here.

You will need:

Tools

Watercolour brushes in a large and a small size such as No.2 and No.7. Buy sable brushes if possible. Alternatively use a Chinese bamboo paint brush which will paint both large areas and detailed work.

Fine, black, felt-tipped pen, pencil.

Sharp knife such as a Swann-Morton surgical knife for scraping paint from the glass surface (keep away from children as it is very sharp).

A wooden 'bridge' for resting your hand on when painting. A bridge can very easily be made from a piece of wood 35cm x 5cm (14″x 2″) with a small block of wood glued on at either end to support it.

Materials

Sheet of plate or window glass. Ask your glass merchant to grind the edges and corners to make it safe to handle. Any size of glass is suitable but start off with a small sheet. 'The White Bird' is painted on a sheet of glass 20cm x 28cm (8″x 11″).

Transparent glass paints, either bought individually or in kits. 'The White Bird' uses blue, green, red, magenta and yellow.

Opaque enamel paint in white and black, or use opaque glass paints.

White drawing paper slightly larger than the sheet of glass.

White paper or card for placing under the glass while painting.

Methylated spirit for cleaning the glass.

Turpentine substitute for cleaning brushes and for thinning the paint if it gets too thick.

Odd piece of glass or old plate to use as a palette for mixing paints.

Small brush, such as a pastry brush or oil painting brush, for cleaning away scraps of waste paint.

Paint rag, preferably lint-free to avoid getting fluff on the glass. Don't use paper tissues as they are too fluffy.

Work in a reasonably dust free room as dust and fluff stick to the wet paint.

☐ Enlarge the graph pattern to required size. Design know-how, chapter 4, page 122 tells how to do this.

☐ Clean the glass with methylated spirit.

☐ Place the glass over the drawing paper and run a pencil round it to get an accurate outline.

☐ Trace a few guidelines with a felt-tipped pen and commence painting.

Painting. Mix up the paints if necessary on the palette, otherwise use straight from the jar. Place the glass over the white paper or card and start to paint.

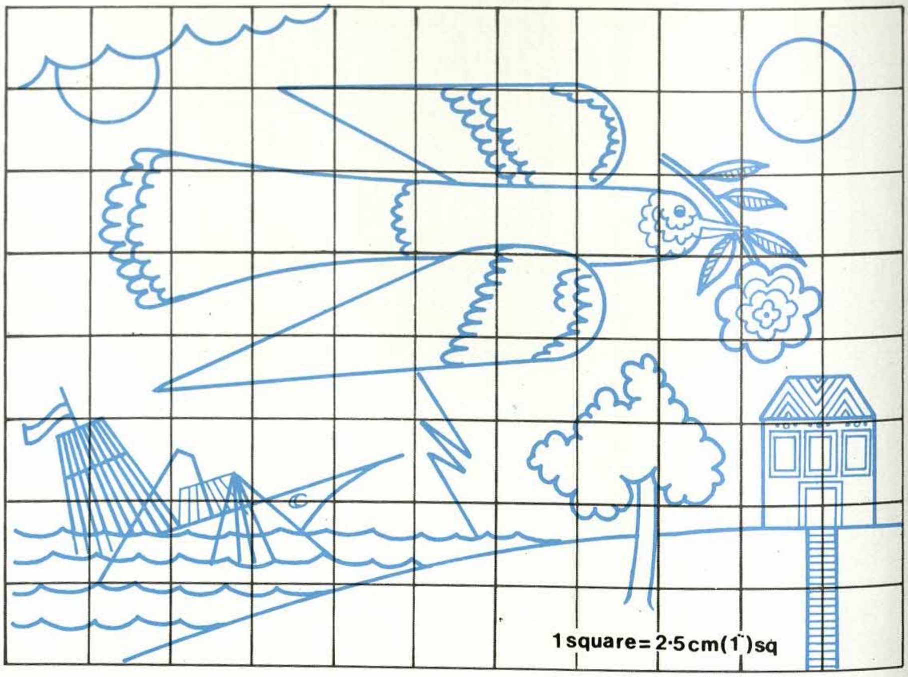
☐ Resting your hand on the wooden bridge start by painting in the background first and then the fine detail, finishing off with the highlights in opaque white paint. Remember that the paint, once applied, cannot be worked over with a second coat until the first has dried (about four hours). Work quickly but carefully to avoid streaky lines.

Some clear areas of glass may look interesting. Try leaving a slim, unpainted line around chosen areas of the design to highlight them, or obtain a textured effect by scraping away some of the paint. Use the end of a paint brush if the paint has not yet dried, or a knife if it has already dried.

You will probably find, as you go along, that you need to give two or sometimes three coats of paint to the design. The extra paint gives depth and subtlety.

Mistakes can be rectified with a knife. Wait until the surface has dried and scrape off the accident zone. Then hold the glass on its edge and brush away the waste paint with a small brush.

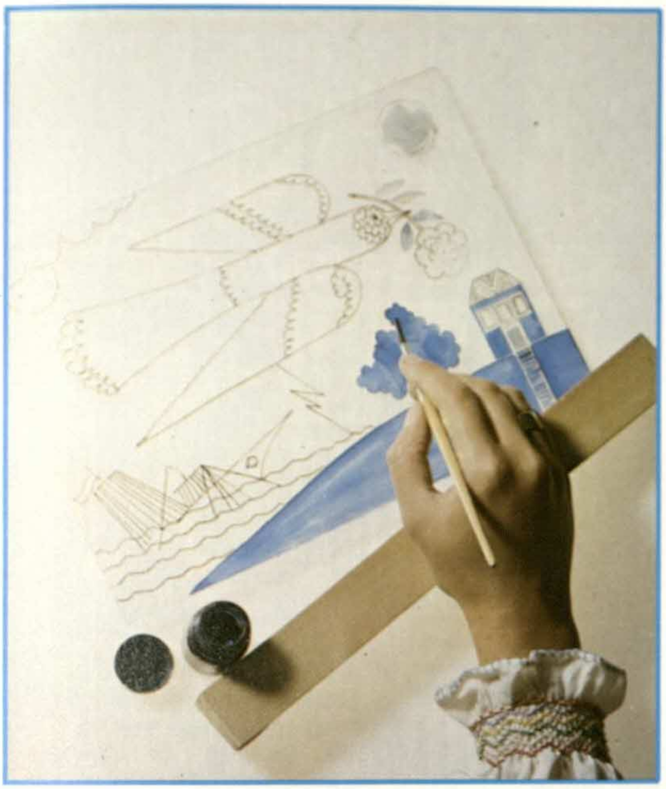
'The White Bird' has a mainly blue background which was painted first. One side was made darker by mixing blue, magenta and opaque black together. The bird is painted blue-green and opaque white feathers added later. Other details and highlights are also painted in. Important shapes, such



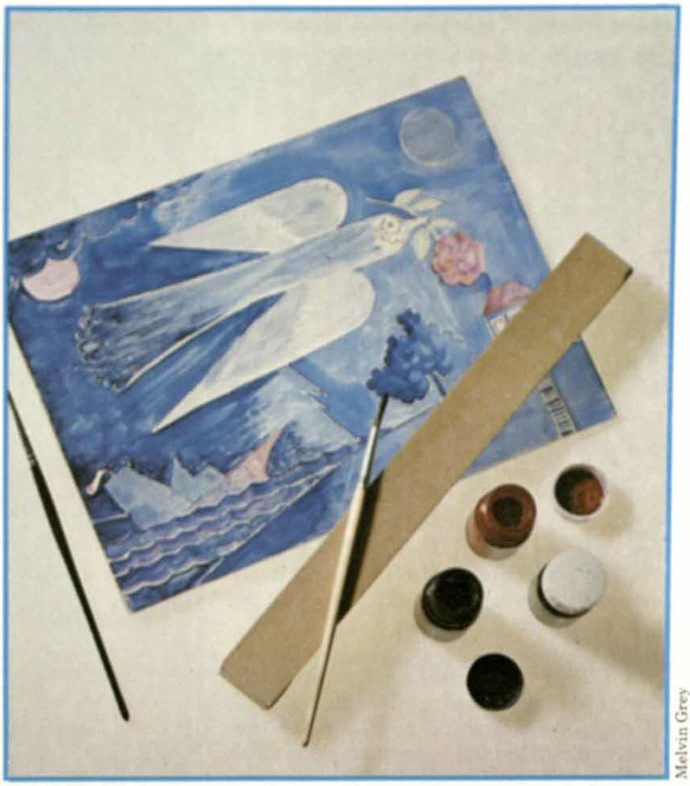
Trevor Lawrence

1. *Enlarge this line drawing of 'The White Bird' and trace outline on to glass with a felt-tipped pen.*

Bottom right: the finished painting of 'The White Bird' designed by German painter Werner Rohde.

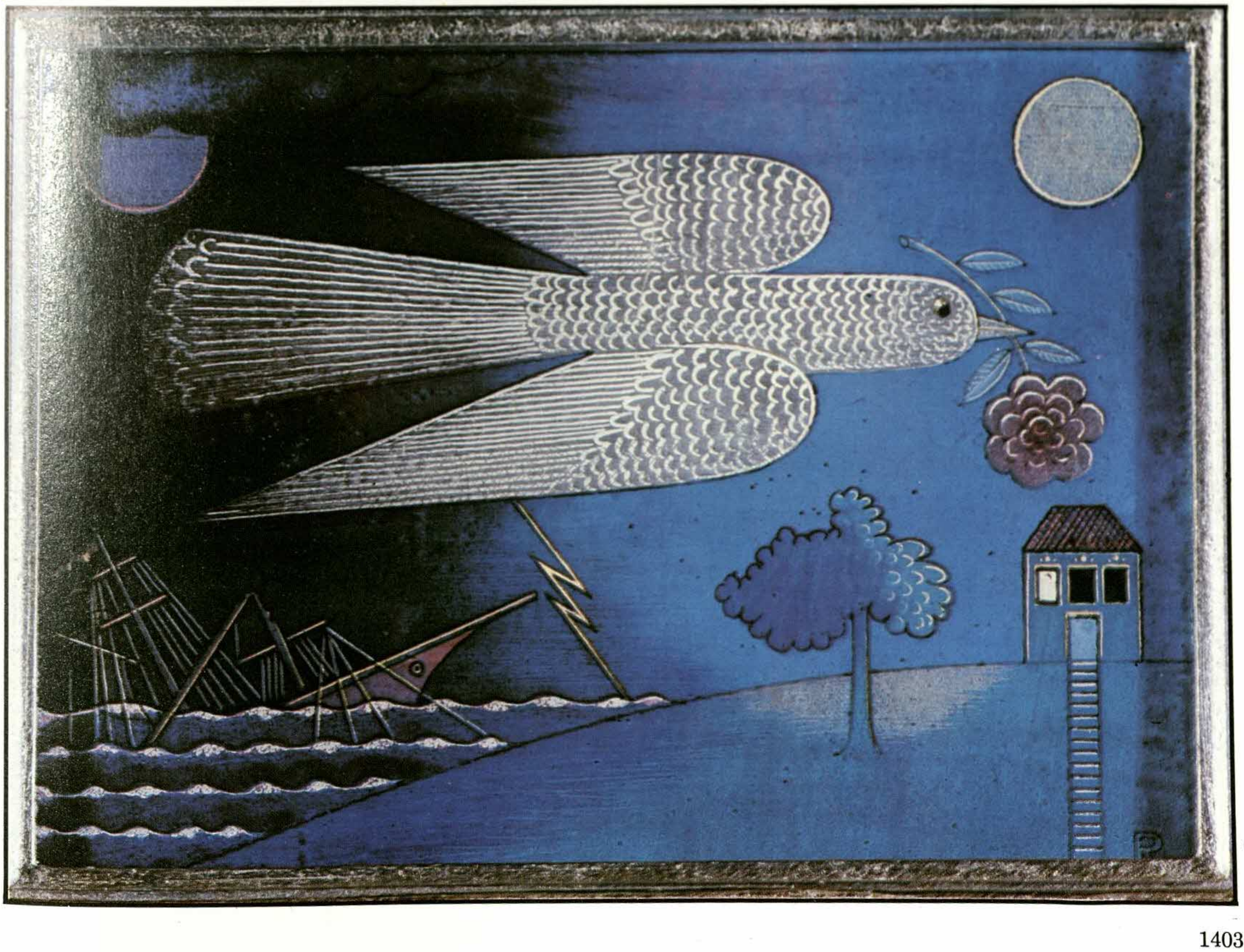


Rest hand on wooden bridge while painting to avoid smearing paint or getting grease on the glass.

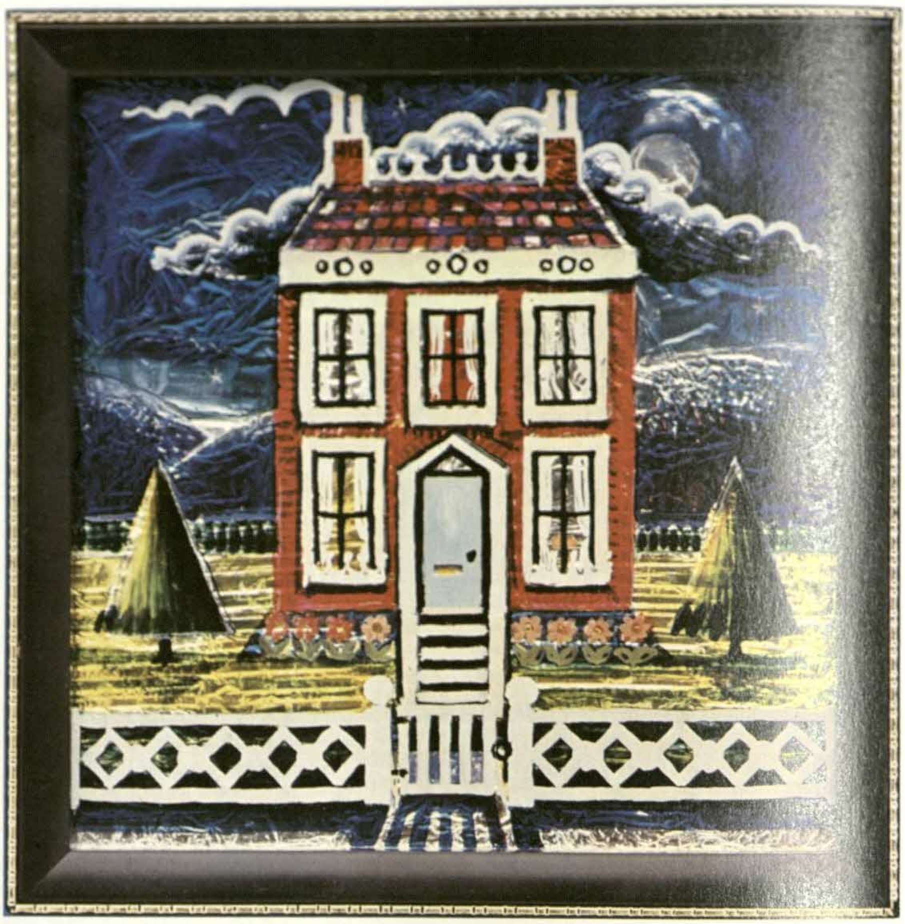


Fill in the broad, flat background areas first, and add the details and white highlights later.

Melvin Grey



Camera Press



When finished the painting is turned over and backed with kitchen foil which adds sparkle to the colours. The design is by Valerie Duthoit.

as the bird's head, are more heavily outlined.

Painting reverse surface

Having discovered how the glass paints handle you may like to try a more ambitious project using a technique popular in the 19th century. In this case the back of the glass is painted, the foreground first and the background last. Remember that the back of the painting will be a mirror image of the front, so that what is painted on the left-hand side of the picture will appear on the right-hand side of the finished painting. The glass is then backed with aluminium kitchen foil to give extra depth and sparkle as in 'The House' illustrated here.

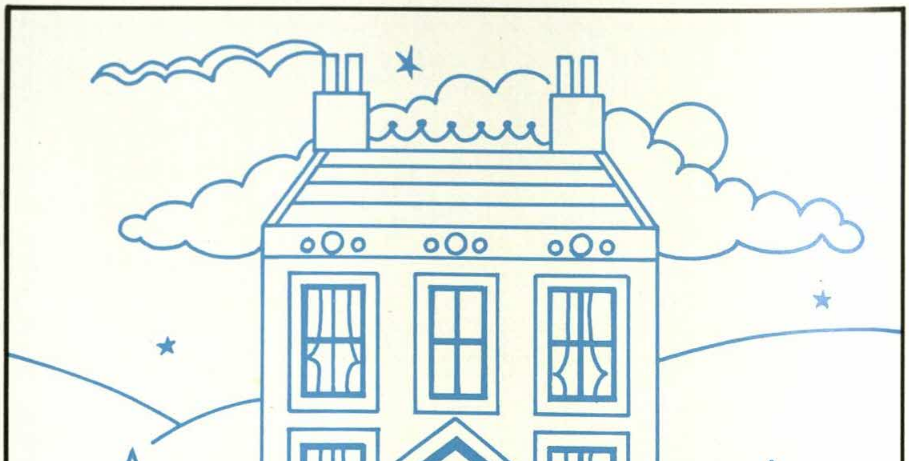
You will need:
Materials and tools as previously described, plus a piece of kitchen foil slightly more than twice the size of the glass, clear general-purpose adhesive, and card the size of the glass.

☐ Using the same materials and equipment as before draw a design (fig.2) on paper the same size as the glass, and trace over with felt-tipped pen.

☐ Place the cleaned glass, underside facing up, over the drawing and with a very fine brush and a little white paint diluted with turpentine substitute, trace a few guide lines from the drawing. Keep the guide lines to the minimum otherwise they will show in the finished result. If you feel bold dispense with the guide lines altogether.

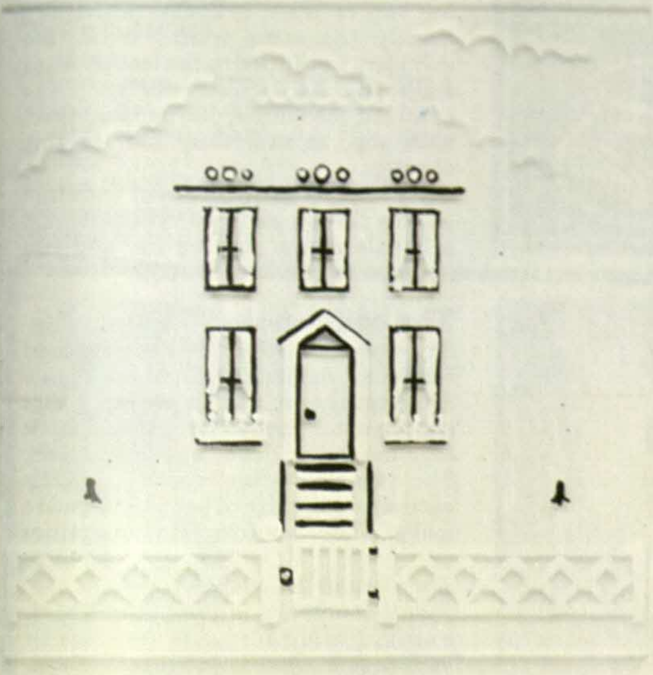
☐ Keeping the drawing under the glass while painting, start by painting in the foreground first. Remember that you are painting the back of the glass. The black lines of the sash windows in 'The House', for example, must be painted before the white curtains because they come in front. When the black lines are dry, paint in the white areas such as the curtains, fence, cloud edge and smoke. Aim for clear, decisive work as it is difficult to retrace your steps. Turn the glass over every now and again and examine the front of the painting to see whether everything is in the right order. Where transparent colours are used, ie everything except black and white, these are built up in successive layers.

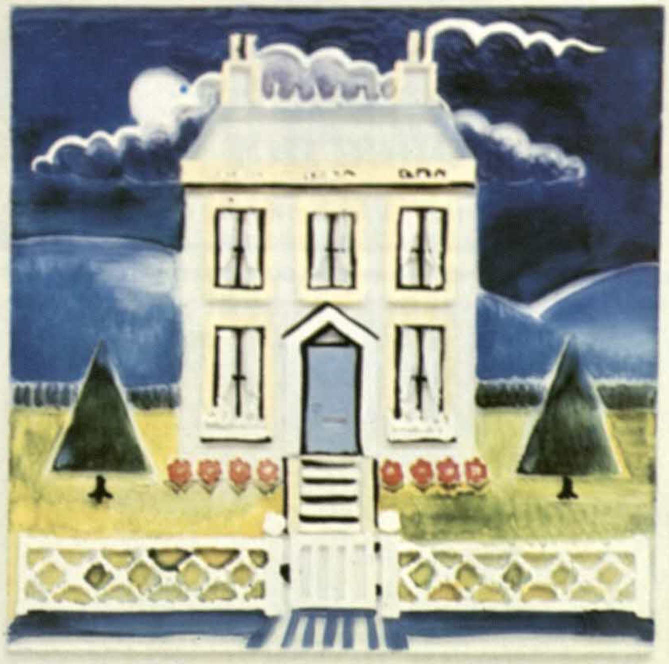
Remember that the backing foil will give extra sparkle when it is placed behind the paint. Leave strategic areas of the painting unpainted such as windows or the underside of clouds and these will then look completely silver. The foil is either used smooth or it can be crumpled up to give an interesting



2. *Use this trace pattern as a guide during painting.*

Trevor Lawrence



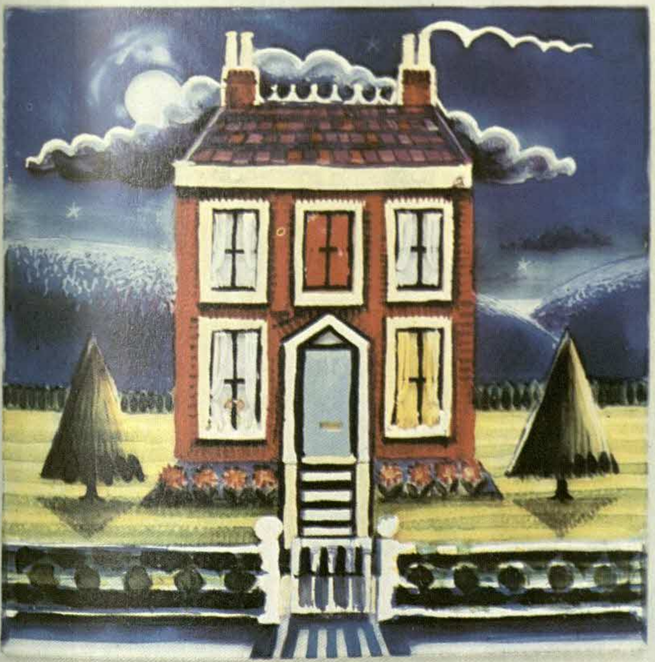


The first stage: details such as the window frames, net curtains, clouds, are painted in opaque black and white.

The second stage: large areas of flat colour such as the grass, and the sky are added using transparent glass paints.

The third stage: depth is added to certain areas and textures are created by scraping paint away, as on the hills.

The kitchen foil backing: notice how the foil has been crumpled in certain areas to suit the painting.



texture. Working on the dull side press and ease the foil; then check to see how it looks behind the painting and whether you have crumpled it in the right place.

When you are satisfied wrap the foil round a piece of card the same size as the glass. Keep the shiny side outwards and overlap the foil at the back of the card. Stick down with adhesive. Turn the card over and apply a speck of adhesive to each corner. Press the glass, painted side down, on to the card and check that the sides are in line.

Framing

Both types of painting can either be propped up against a window, wall or dresser or you can frame them. Use an ordinary picture frame for the painting with kitchen foil, but be sure to remove the backing to the frame for any other painting on glass. Without the backing the light will shine through the glass when you hang it in front of a window or other light source.

Alan Duns

A cylindrical coffee pot

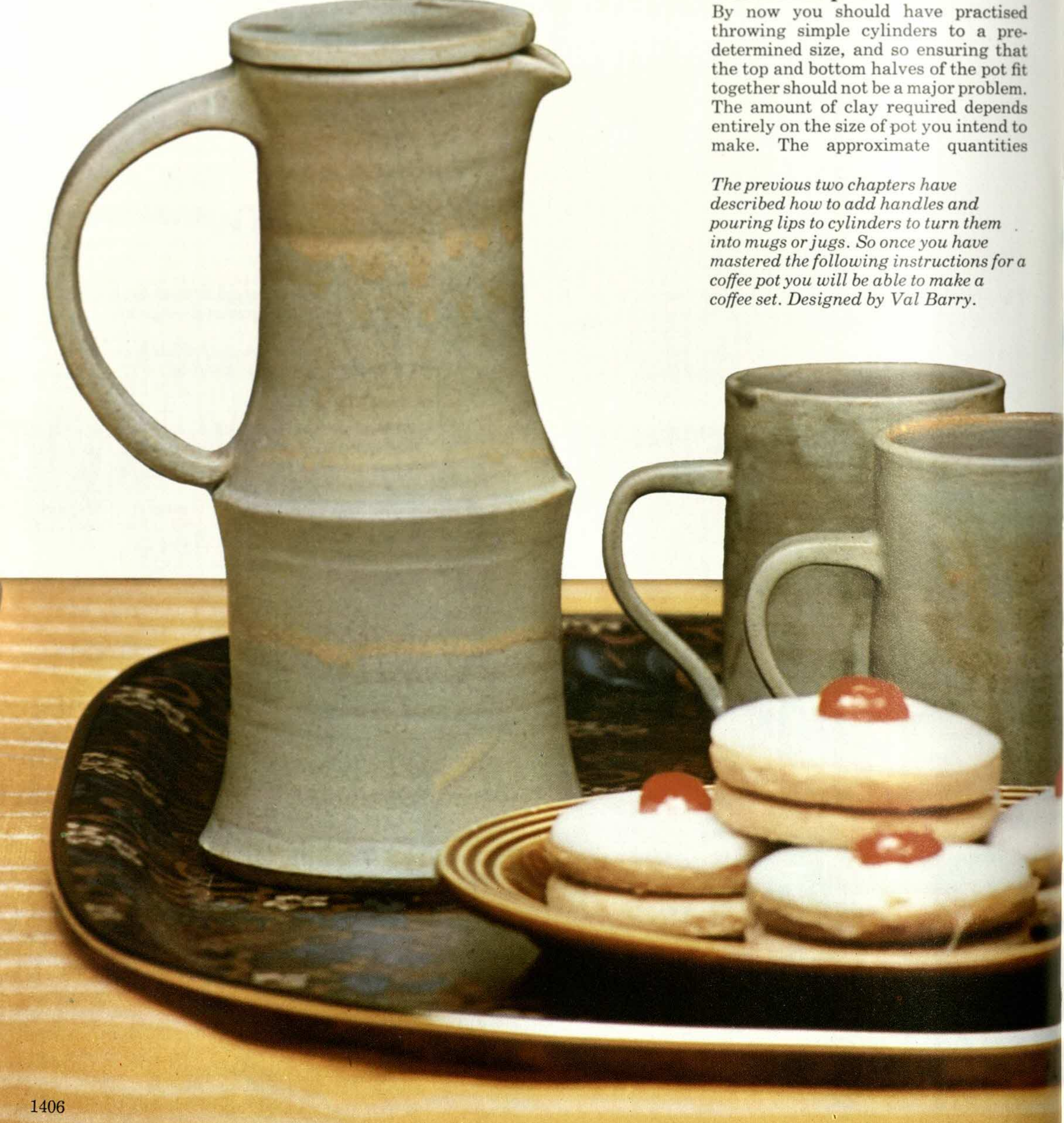
Tall vase shapes can be made by throwing two or three cylinders which are exactly the same width. When the cylinders have dried to the leather-hard stage, you can cut away the base areas of all but the bottom one and join them with slip, as described later in this chapter.

For a slightly more practical variation on this theme, join two cylinders, add a handle and a pouring lip, and you have a serviceable coffee pot.

The coffee pot

By now you should have practised throwing simple cylinders to a predetermined size, and so ensuring that the top and bottom halves of the pot fit together should not be a major problem. The amount of clay required depends entirely on the size of pot you intend to make. The approximate quantities

The previous two chapters have described how to add handles and pouring lips to cylinders to turn them into mugs or jugs. So once you have mastered the following instructions for a coffee pot you will be able to make a coffee set. Designed by Val Barry.



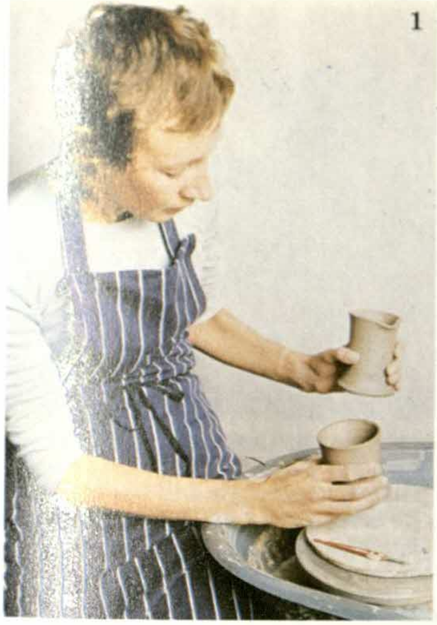
given below relate to the small coffee pot illustrated.

You will need:

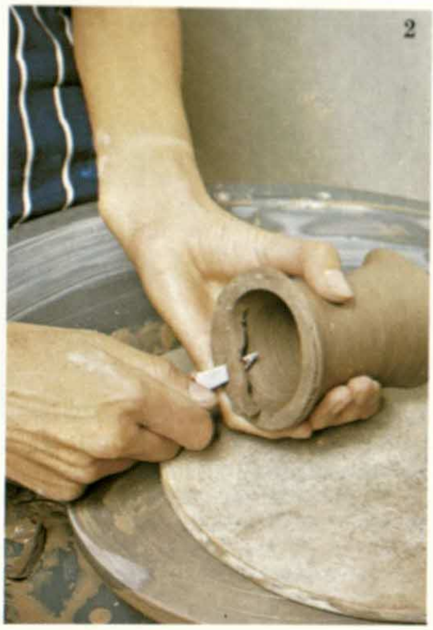
A wheel.
About 500gm (1lb) prepared throwing clay for the lower cylinder.
About 350gm (12oz) for the upper cylinder.
About 400gm (14oz) for the handle.
Junior hacksaw blade.
Scalpel or craft knife.
Old toothbrush.
Wooden spatula.
Bowl of water.
Calipers.
Cutting wire to remove pots from the wheel.
Board on which to place finished pots.

☐ Throw the bottom cylinder first and measure the top with calipers. Remove it from the wheel.

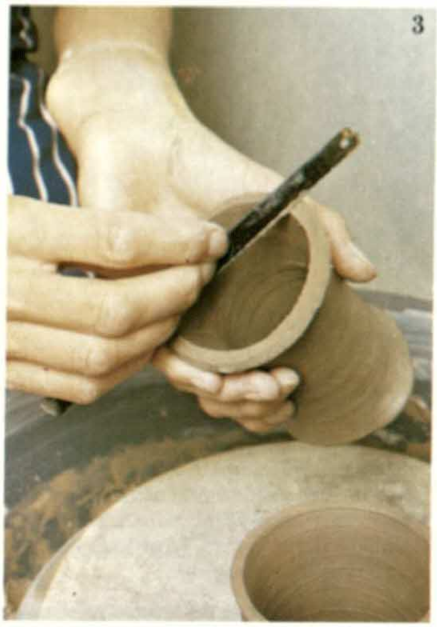
☐ Throw the top cylinder next, remembering that it does not have to be exactly the same shape and size, but that the base must fit the top of the bottom cylinder. To achieve this, measure with the calipers as you work and push the base of the cylinder out from the inside until the size is correct. The top cylinder is collared and a pouring lip formed by the method described in Clay chapter 31, page 1346 and chapter 32, page 1374.



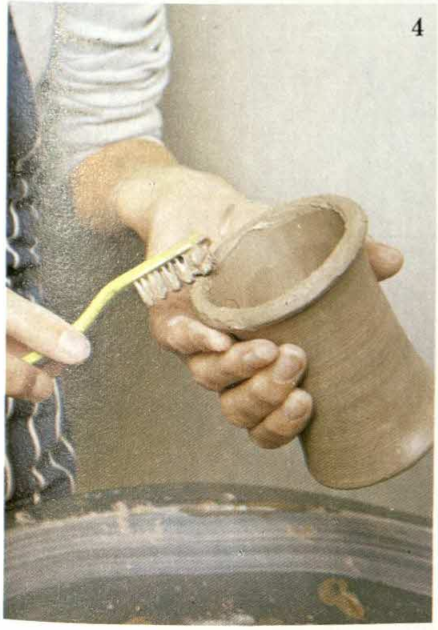
☐ Remove the second cylinder from the wheel, check size of other half and dry to the leather-hard stage (fig.1).

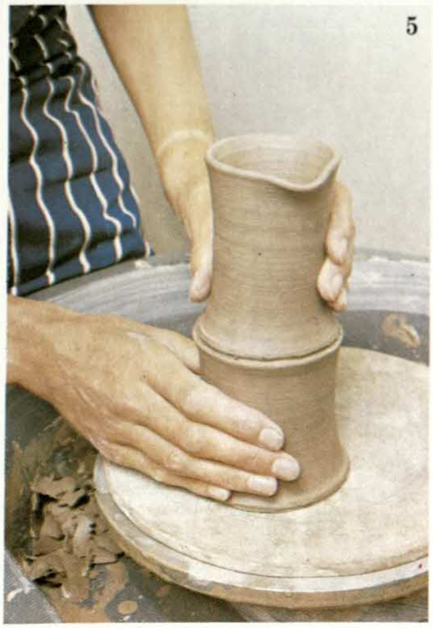


☐ Use the sharp blade to cut out the base of the top cylinder and to neaten the inside edges (fig.2).



☐ Use the hacksaw blade to score and level off the two edges which are to be joined together (fig.3).

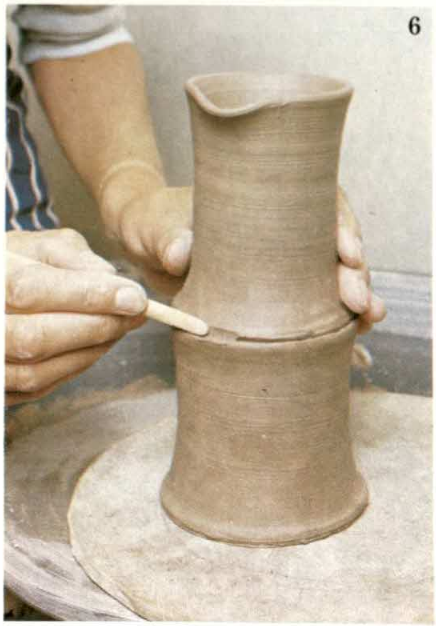




☐ With an old toothbrush, apply a good coating of slip to both edges (fig.4).

☐ Press the two halves of the coffee pot firmly together (fig.5).

☐ Smooth the outside of the join firmly with the tip of your index finger to ensure good adhesion.



☐ You can make a feature of the join by using a wooden spatula to accentuate it into a decorative band (fig.6).

Jerry Tubby

Nelson Hargreaves

☐ At this stage you should make and attach the handle, as described in Clay chapter 31, page 1346.

When planning the handle, take into account not only the design of the pot but the fact that it must pour well which means that the handle must be placed directly opposite the lip. It must also be sufficiently robust to support the pot when it is full of hot liquid.

In this particular design, the top of the handle was attached just below the rim and the bottom just above the join.

The lid

A fitted lid is only another adaptation of the basic cylinder form.

You will need:

A wheel.

About 150gm (5oz) of prepared throwing clay.

Calipers.

Scalpel or craft knife.

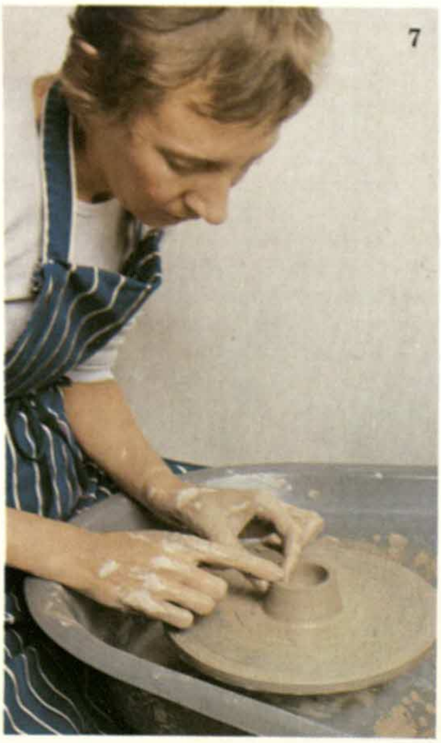
Needle stuck in a cork.

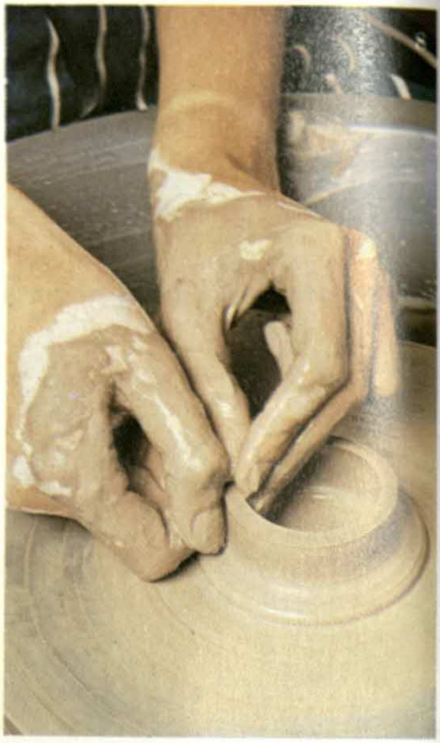
Wooden tool with pointed end.

Bowl of water.

Cutting wire and board.

When you begin you must simply judge the size, always remembering that it is best to err on the side of making the lid too small. If it is too narrow you can simply widen it as you would widen any cylinder. If, on the other hand, it is too large, you will have to scrap it and start again.

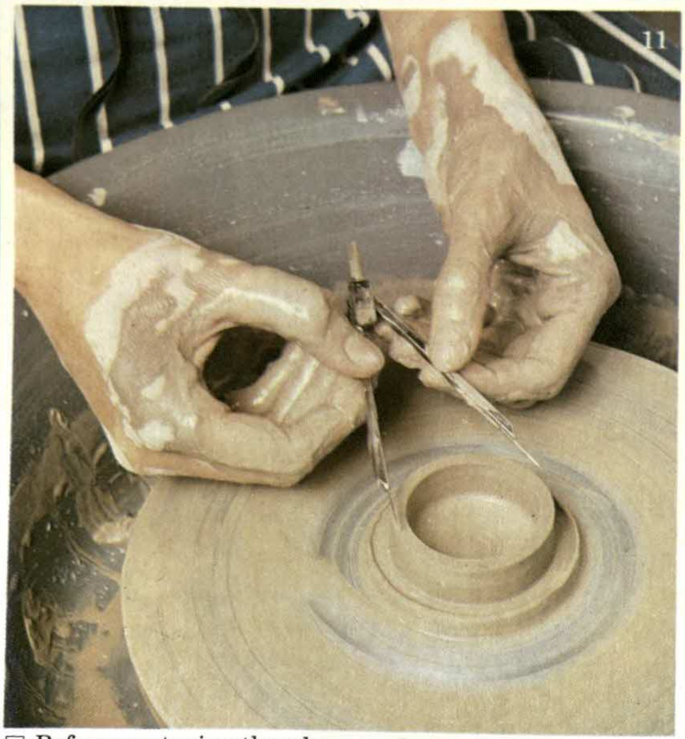


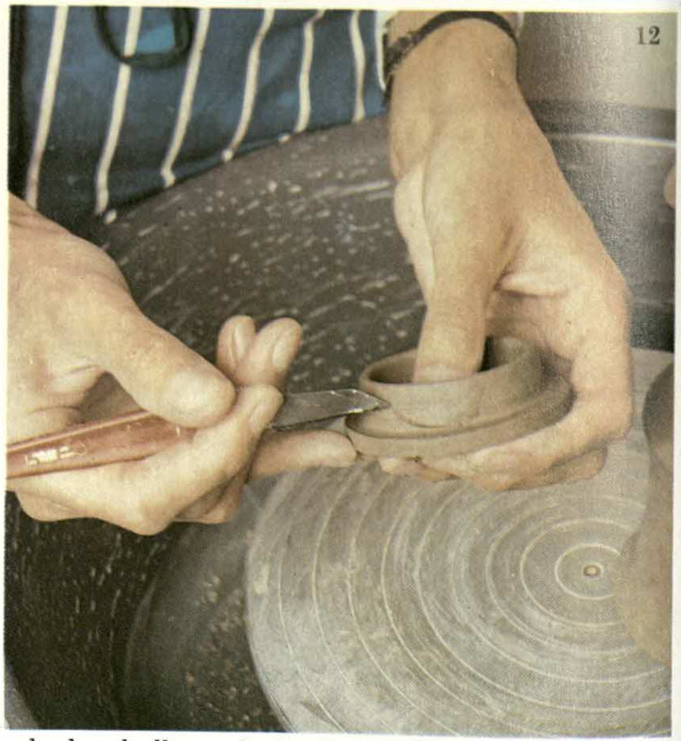


☐ First, throw a thick walled, short cylinder (fig.7).

☐ To form the top of the lid, hold the inside of the cylinder steady with the fingertips of the left hand and press gently but firmly downwards on the outside with the thumb of the right hand (fig.8).

With experience you will learn to judge size accurately, but while you are still experimenting it is wise to measure the lid with calipers at every stage.





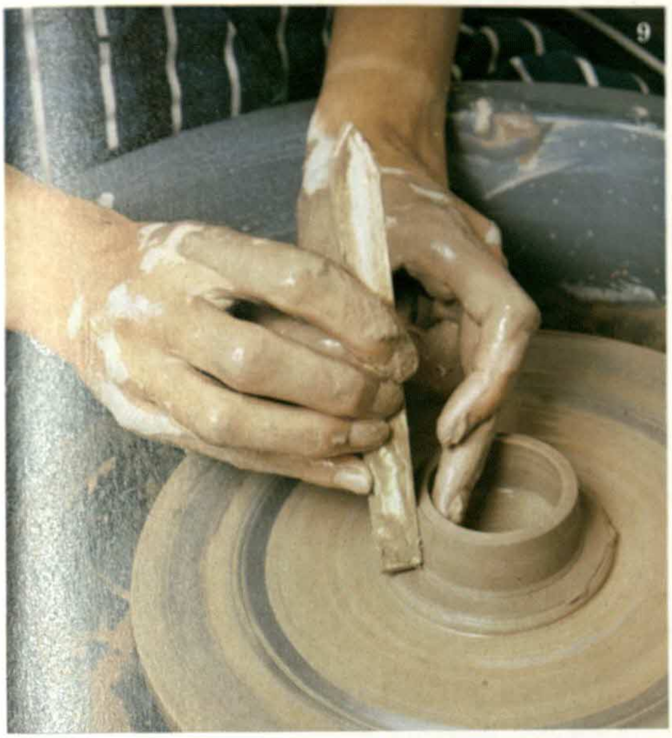
☐ Before neatening the edges one last time with the wooden tool, and removing the lid from the wheel, use the calipers to check that the size is finally correct (fig.11).

☐ Remove from the wheel and allow the lid to dry out to the leather-hard stage.

It is now necessary to cut an opening in the lid so that the coffee will pour freely when the lid is in place.

☐ Use the point of the sharp blade to carve a horseshoe shape on the central cylinder. It must be as wide as, or slightly wider than, the lip (fig.12).

Nelson Hargreaves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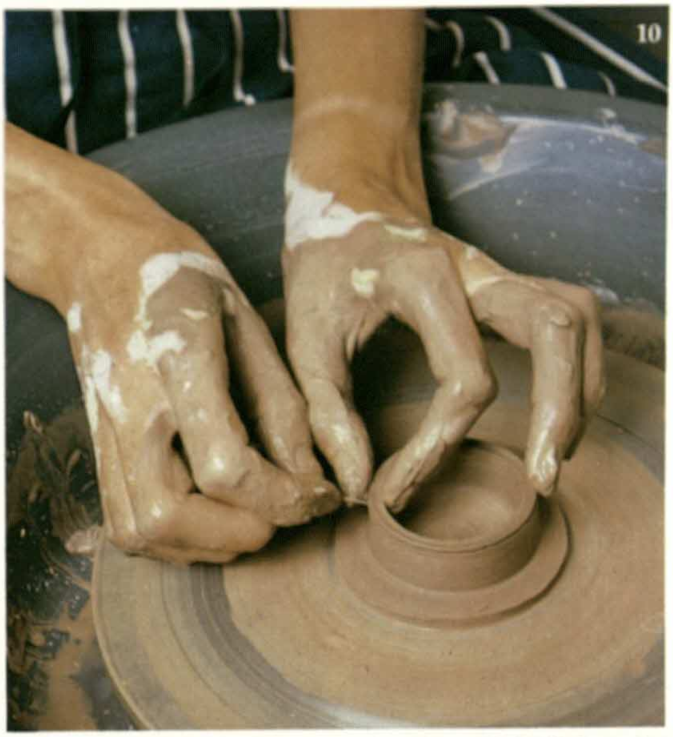
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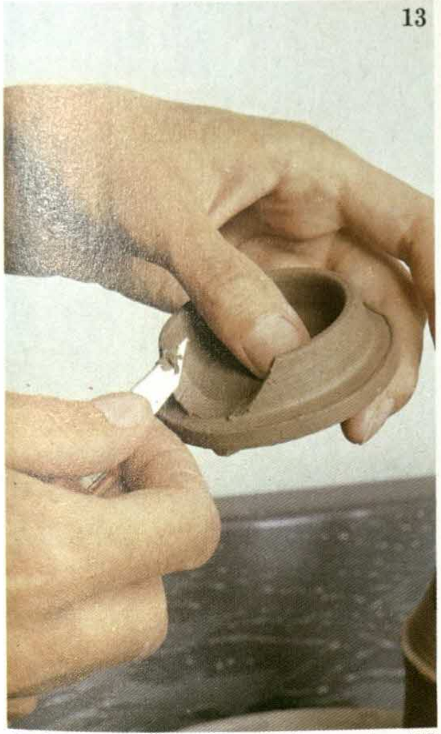
Remember that you are throwing the lid upside down and that the central cylinder must be narrow enough to fit within the top of the pot and the top wide enough to be supported on the rim of the pot without overlapping the edges.

☐ Use a wooden tool to square off the edges of the central cylinder, supporting it from the inside with the fingers of your free hand (fig.9).

☐ If the central cylinder is too deep it will need to be trimmed; hold the point of the needle steadily against the clay at the correct height. As the wheel revolves the needle will cut into the clay, removing a strip from the top (fig.10).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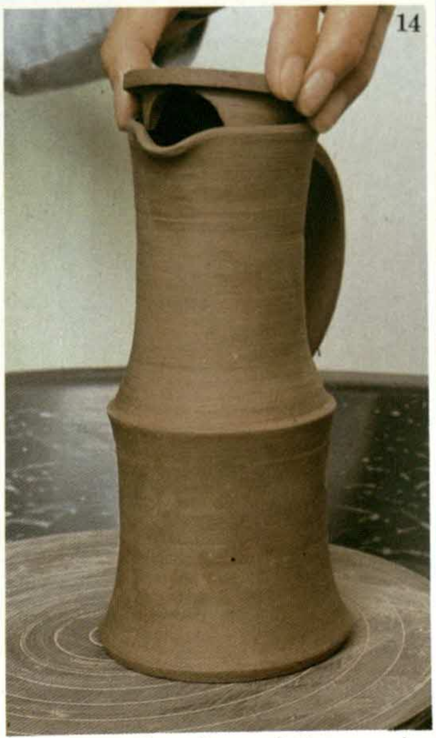
☐ Taking care not to distort the lid, follow round the line you have made with the point of the blade, deepening the cut gradually until the horseshoe-shaped piece falls out.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☐ Neaten the edges of the opening (fig.13). The lid must fit neatly, the central cylinder deep enough to hold it when the pot is tilted for pouring (fig.14).

Attaching a knob

A knob is neither suitable nor necessary to this particular design. If you want to add one, however, roll a small piece of prepared clay into a ball in your hands. Flatten the base very slightly. Place it on the lid to see if it looks right. Make it larger or smaller if necessary and, when you feel you have achieved the right proportions, use the needle to score the centre of the lid and the bottom of the knob. Apply slip to both the scored areas and press the knob firmly into place.

Paul Williams

Cosy capes from blankets

Cloth — sewing 14

Capes are comfortable, keep out the cold and are quick and easy to sew. The capes shown here are made from wool blankets—two blankets equal three capes! If you have switched to duvets for easier bedmaking it's a good way to use up blankets.

The adult cape takes one double bed size and two children's capes can be made from one single blanket.

Adult's cape

Maximum length 150cm (59").

You will need:

One double blanket about 228cm x 254cm (90" x 100").

10.10m (11yd) braid binding, about 2.5cm (1") wide.

Matching thread.

Drawing pin with a long point.

Fine string.

Dressmaker's marker pencil or chalk.

Tape measure.

Metre (yard) stick.

Cutting out

Note: there is no need to make a pattern—just draw the cutting lines straight on to the blanket.

☐ Lay the blanket flat on the floor with right side up.

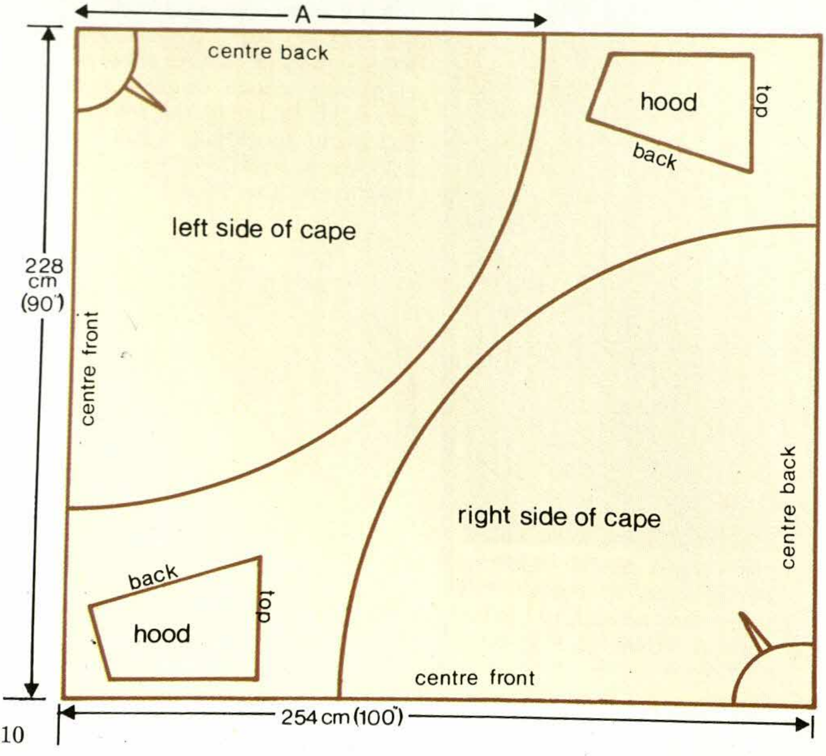
☐ To draw the cutting lines use the pin and string method (Design know-how chapter 1, page 28), cut a groove round the pencil or chalk just below the point. Tie one end of the string round the groove in the pencil.

☐ Measure from neck edge over the shoulder to the length required plus 15cm (6"). This is measurement A (fig.1a).

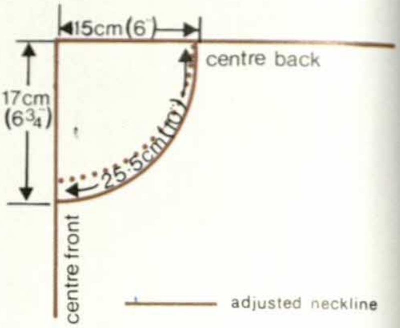
☐ For left side of cape measure length A off along the string. Stick the pin into the top left-hand corner of the blanket.

☐ Draw a curve for hemline (see fig.1a).

☐ Adjust length of string to 15cm (6") and draw in the neckline curve, then adjust freehand following given measurements (fig.1b).



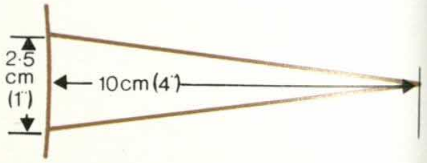
1a. *Cutting layout for adult's cape drawn on double bed blanket.*



1b. *Measurements for neckline curve drawn in the corner of the blanket.*

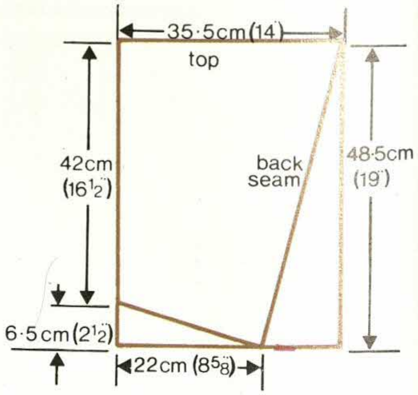
☐ Repeat from the opposite corner of the blanket, for right side of cape.

☐ Mark in the darts with the pencil and tape measure (fig.2)—they fall roughly in the centre of the neck edge.



2. *Measurements for the darts drawn roughly in the centre of neckline.*

☐ Hood: using metre (yard) stick, draw in the hood shape to the measurements given (fig.3). The simplest way is to draw the rectangle first, then measure off the points where they touch the outer lines.



3. *Cutting layout for hood. Mark out all measurements carefully.*

Trevor Lawrence

☐ Cut out the cape and both halves of hood.

Making up:

☐ Stitch centre back seam of the cape with a run and fell seam (page 1413).

☐ With the right sides together pin and tack the darts on the shoulders.

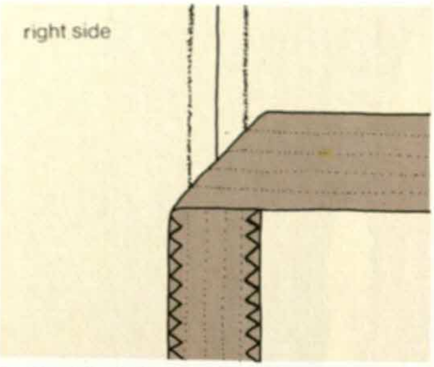
☐ Try on the cape to make sure the

Right: warm wool blankets made into capes by following the simple instructions given on this page and the following two pages. Both neck edges are fastened with a furrier's hook and eye.

darts are in the correct place. Adjust if necessary and stitch. Cut open the dart on the fold to within 5cm (2") of point and press open. Neaten raw edges.

☐ With the wrong sides of the fabric facing and taking 2cm (¾") seam allowance stitch the hood pieces together along the top and centre back. Trim away half of the seam allowance cutting diagonally across the corner point. Press seam open.

☐ Cover the seam with braid by laying the braid over the pressed seams and stitching down each side. This can be done by hand or machine (fig.4).



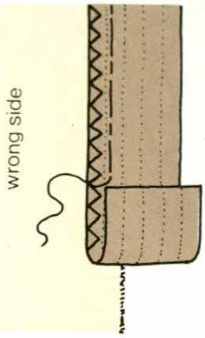
4. *Braid stitched over the pressed open seam on right side of hood.*

☐ With the wrong sides of the fabric facing stitch the hood to the cape, matching the centre back seams and front edges. Press seam. Trim away half the seam allowance, press open and stitch braid over the seam in the same way as for the hood.

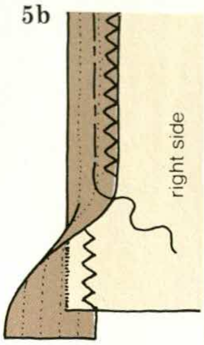
☐ Put cape on a coat-hanger and leave to drop, try on the cape and even up the hemline.

☐ Bind all the raw edges with braid. Tack and stitch the binding to the wrong side of the cape around the raw edges, overlapping by about 1cm (⅜") (fig.5a). Fold the binding over the raw edges, tack and stitch to the right side of the cape. If you have a zigzag stitch on your machine use this for stitching the binding (fig.5b).

5a

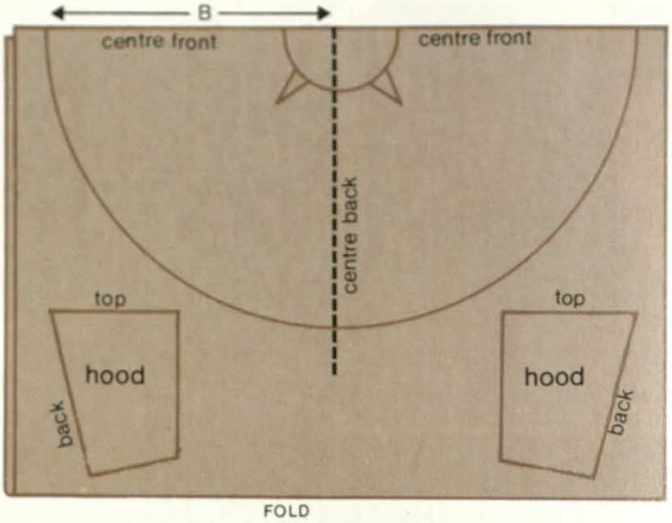


5b



5a. *Braid stitched to wrong side.*
5b. *Folded to right side and stitched.*

☐ Attach appropriate fastenings at the neckline.



6a

Child's cape

Maximum length 74cm (29¼").

You will need:
One single blanket about 178cm x 254cm (70"x 100").
Note: One blanket will make two capes.
6.40m (7yd) braid binding for each cape.
Matching thread.
Drawing pin with long point.
Fine string.
Dressmaker's marker pencil or chalk.
Tape measure, metre (yard) stick.

Cutting out

Note: there is no need to make a pattern—just draw the cutting lines straight on to the blanket.

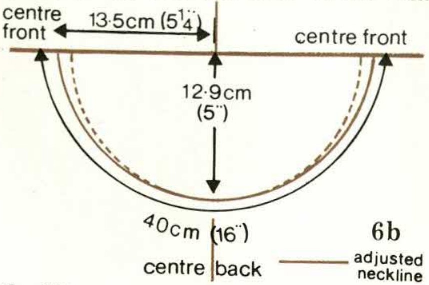
☐ Measure from neck edge over shoulder to length required plus 12.9cm (5"). This is measurement B (fig.6a).

☐ Fold the blanket in half widthways with wrong sides together if you are making two capes, and pin. To draw cutting lines, use the pin and string method (as for adult's cape), measure length B from pencil and put in drawing pin.

☐ Place the pin into the centre of the blanket on the open edge and draw a half circle for hemline (fig.6a).

☐ Alter the length of string to 12.9cm (5") and draw in the neckline curve, then adjust freehand to given measurements (fig.6b).

☐ Then cut out the half circle and the neck edge curve.

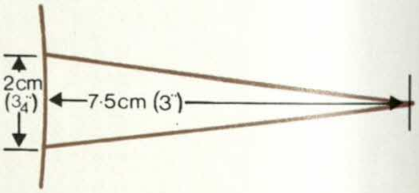


6b

6b. *Measurements for the neckline are drawn in then adjusted freehand to give the correct curve.*

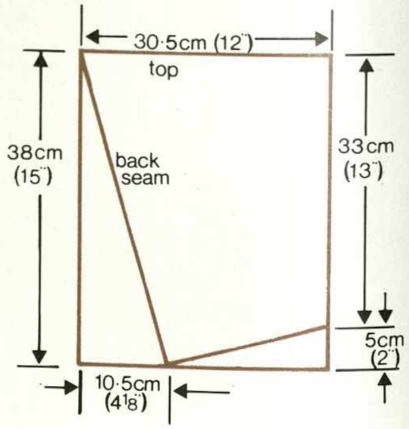
6a. *Cutting layout for single blanket folded double across the width. This will make two children's capes.*

☐ Mark in two darts with pencil or chalk (fig.7) about halfway between centre back and centre fronts.



7. *Darts drawn in half way between the centre back and centre front.*

☐ Hood: Using the metre (yard) stick draw in both halves of hood shape to given measurements (fig.8).



8. *Cutting layout for child's hood. The rectangle is drawn first then the other lines drawn in to give the correct shape.*

Making up:
Make as for the adult's cape, omitting the centre back seam.

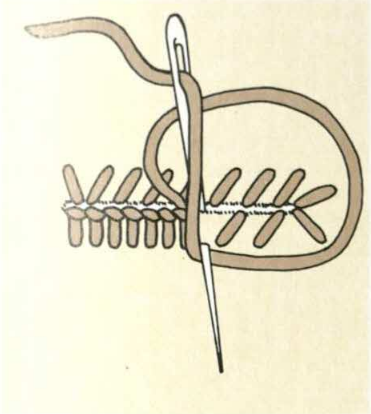
Basic sewing know-how

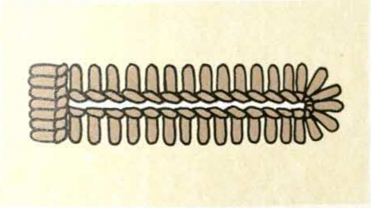
Hand-worked buttonholes

Mark the buttonhole position with chalk to the length required, about 3mm ($\frac{1}{8}$″) wider than the button, depending upon the depth of button. Cut along the line and oversew the cut edges. Take a length of buttonhole twist long enough to complete the buttonhole and, working from left to right and from the right side, insert the needle into the back of the fabric. Before pulling the needle through bring the thread under the point to form a loop. Pull the needle through, this will make a small knot on the edge of the cut.

Continue making looped stitches fanning out the stitching at one end. Turn the work and continue along the other edge.

At the end make a small bar across both rows of stitches.





Fastenings

The cape can be fastened in a variety of ways—here are three methods: frog fastenings, tab fastenings and toggles.

Frog fastening

This is a decorative fastening which can be bought ready made, or you can make it yourself.

You will need two lengths of cord, one about 63.5cm (25″) long and the other 43cm (17″). Twist and loop the cord as shown (fig.a). Slip stitch at all points that cross.

Stitch securely to the garment. The ends of the cord are hidden behind two buttons, one on each side of the front.

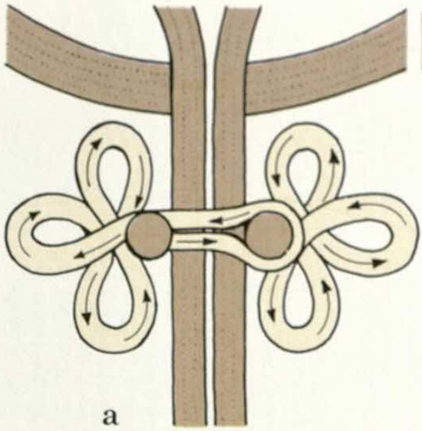
Tab fastening

Cut a kidney shaped tab from a scrap of blanket fabric about 12.5cm x 5cm (5″x 2″). Bind the edges with braid and work two buttonholes in the tab. Fasten to the cape with two buttons (fig.b).

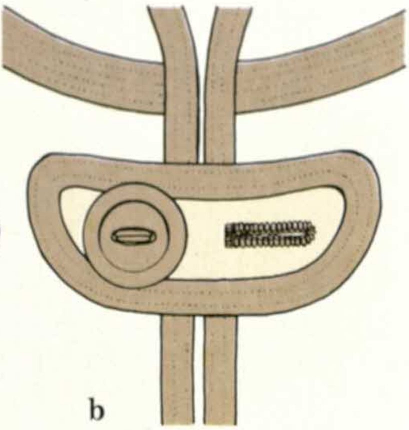
Toggles

Two or three toggle fastenings look effective. You will need for each fastening:—wooden or leather toggle, 2 leather thongs or plaits of wool each 23cm x 1cm (9″x $\frac{3}{8}$″), scraps of leather or felt cut into two triangles.

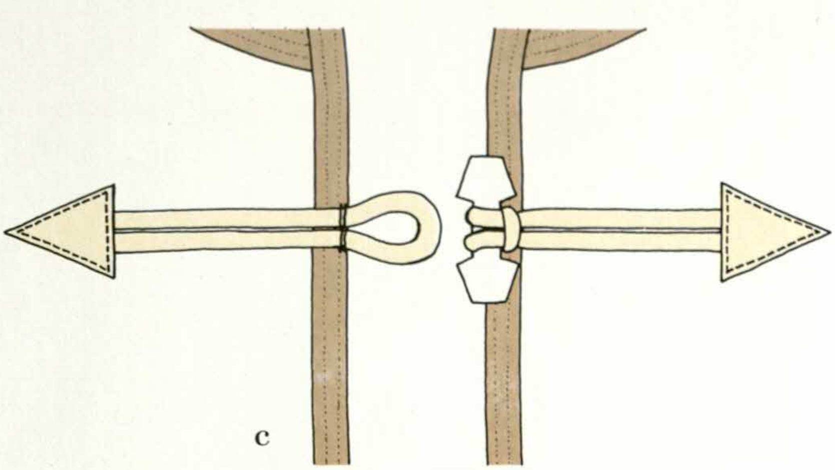
Loop the thongs or plaits in half and catch stitch them to the fronts of the cape, extending the loop beyond the edge of the cape on the right hand side and placing the toggle into the loop on the left side before stitching. Stitch the triangles over the ends (fig.c).



a



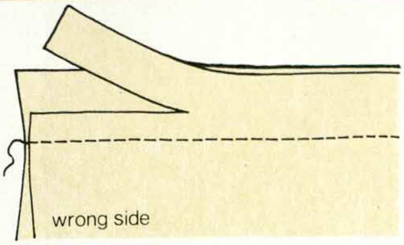
b

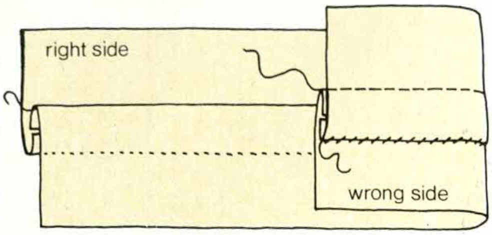


c

Run and fell seam

With right sides of fabric facing, tack then machine stitch the seam, taking 2cm ($\frac{3}{4}$″) turnings. Trim seam allowance on one edge only to 0.5cm ($\frac{1}{4}$″). Then press seam and turn in the untrimmed edge over seam allowance, hemming turnings to fabric by hand.





Coral Mula

Beginning rush work

Rush baskets and matting have been made for centuries. The ancient Egyptians used rushes a great deal and even made rush boats on which to live. In England, during Tudor times, rushes were used to make a tallow light by dipping rushes into wax. Rush was also used as a floor covering for those who could afford it. Only a wealthy family could have the rushes changed more than once a year. Later on rushes were plaited and sewn into mats which were longer lasting.

Rush work is quite easy, even if you have never done any before. The colour and texture of natural rushes make them a joy to handle. Nowadays many beautiful articles are made, both useful and decorative, that blend with perfect harmony to our modern way of living.

Rushes grow in still waters and slow moving rivers. Once harvested they are left to dry slowly. They are then tied into bolts and sold as such. The lengths of the rushes in a bolt vary—the average length is about 183cm (6′).

Storage

Rushes should be stored in a dry airy place, preferably in the dark, so that the colour does not fade. A loft is a good place because a layer of dust helps to protect them.

You can gather plants from the garden which are suitable for rush work. Irises, gladioli and montbretia, and

Melvin Grey

Left: some of the grasses suitable for rush work include montbretia, gladioli, irises and rushes. Rushes are found in still and slow moving water. Once harvested they must be left to dry slowly.

many grasses, dry into rich golden brown colours and many of the tall plants from ponds are also suitable. Cut the plants towards the end of summer and leave them to dry. Then prepare them in the same way as rushes when you are ready to use them.

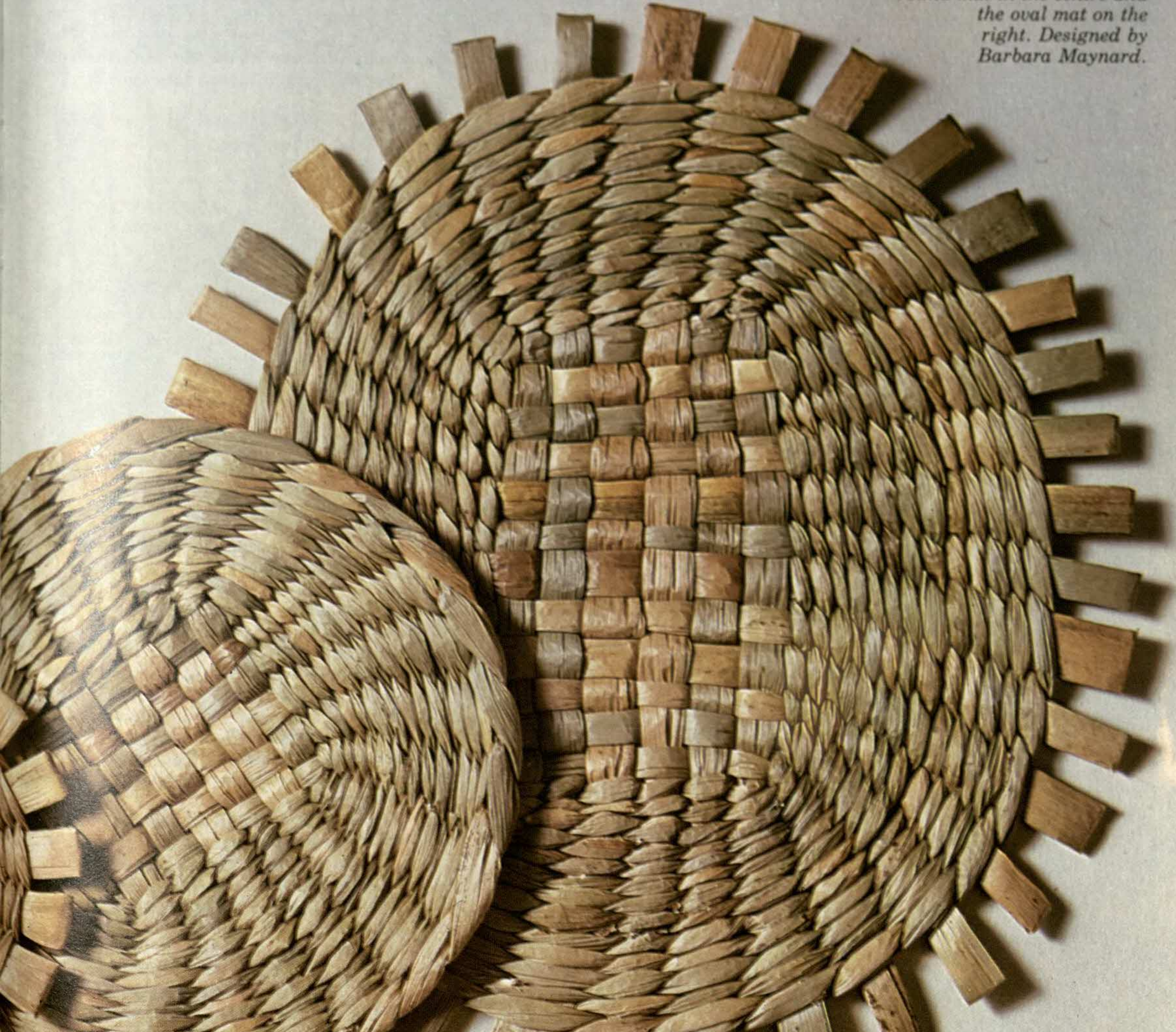
Preparation

Be careful how you handle the rushes while they are dry because they are very brittle and damage easily.

Rushes must be wetted for about five minutes, either by sprinkling with a hose or watering-can in the garden, or by dipping the rushes in a bath of cold water. If you can put them out in the rain even better. The rushes are then wrapped up in a wet blanket, flannelette sheet or sacking for a further three hours to mellow. It is a good idea to leave the rushes overnight so that they have all night to mellow and are ready for working in the morning.

Before the rushes are used each rush must be prepared. The thin end must be tested for strength. Hold a rush in both hands about 15cm (6") down from the brown flowery top (or thin end if it has lost its flower) and pull it apart with a gentle tug. Do not be too strong—just a little tug. Discard the broken end and try again another 15cm (6") down until the rush is quite firm and does not snap. It is much less frustrating to get rid of the weak bits first, and so preventing the rushes from snapping when the weavers are pulled into place. You will soon get to know how much strength to use. If a rush snaps when weaving you will know you did not take enough away and if you chop it right up to the thick end, then you have been too heavy-handed.

Each rush must now be 'wiped'. This is partly to clean the rush and partly to



Three examples of flat rush work. Instructions are given for the round mat in the centre and the oval mat on the right. Designed by Barbara Maynard.

remove all the air and water from inside the stem. Hold the stem in one hand at the thin end and with a damp cloth in the other hand wipe along the rush, pressing it flat at the same time so that the water runs out of the thick end. If this is not done the work will shrink too much after weaving leaving it loose with gaps showing.

Tools and equipment

The tools and equipment for rush work are very few and inexpensive. Apart from the blanket to wrap the rushes in and the damp cloth to wipe them, you will need a pair of scissors and a rush threader. A rush threader (fig.1) can be obtained from craft shops but a football lacing awl is just as good.

1. *A rush threader or football lacing awl is used to thread ends into work.*

You will also need some form of frame or mould to build the baskets on—a block of wood, flower pots and biscuit tins all make good foundations for rush work. Later projects require string, or thread, both fine and coarse. Fine thread is used for sewing plaits together and coarse thread for tying the work on to the mould. A large-eyed needle is required for the sewing.

The round mat

Start working by making a table mat to familiarize yourself with the tools and materials before starting baskets. The mat is about 20cm (8″) in diameter. When planning your own mats add 10cm (4″) extra to each end of each stake to allow for a border.

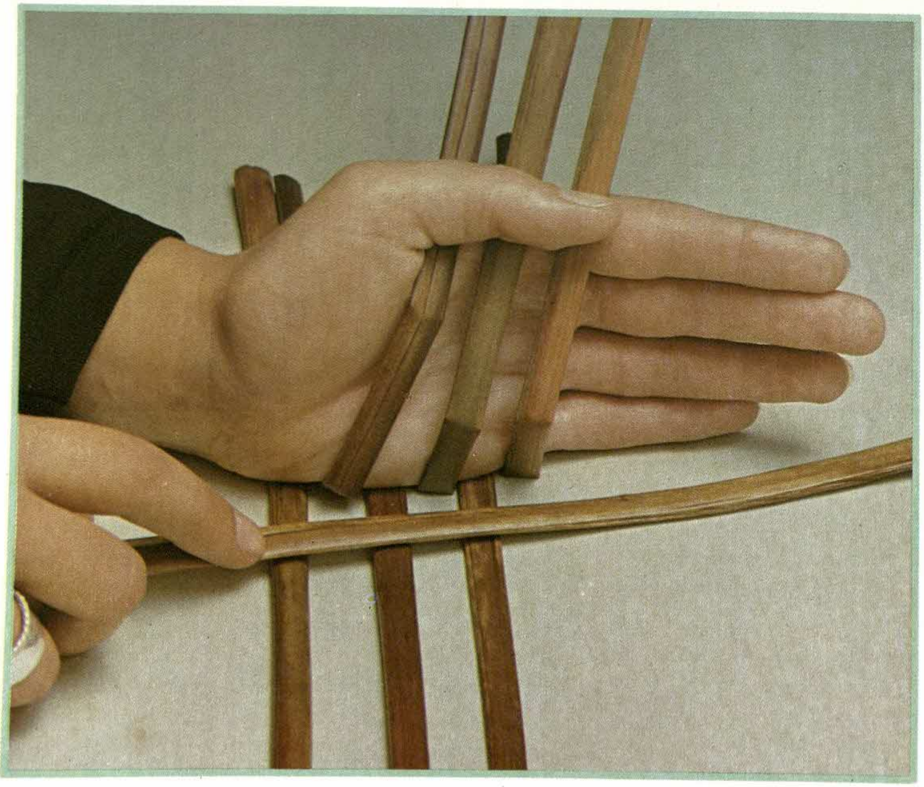
You will need:
12 thick rushes 12mm ($\frac{1}{2}$″) diameter, 41cm (16″) long. Cut them from the butt (thick end) of good quality rushes.
12-16 fine rushes for weaving.
Rush threader.

Check weave. Wipe the 12 thicker stakes to clean and flatten them. Lay 6 of them close together horizontally in front of you. Arrange the rushes with thick and thin ends alternating so that one side of the work does not finish more 'solid' than the other.

☐ Hold them on the table with your left hand to the left of the centre. Pick up, and hold in your left hand, the first (the one furthest away from you), third and fifth stakes.

☐ Lay another stake across the 2nd, 4th and 6th stakes close to your left hand as illustrated so that when the stakes in the left hand are returned to their starting position they form the first row of the check weave. Now the working order of the horizontal stakes will change and the 2nd, 4th and 6th stakes will come up. You will achieve better results if you start picking up the next row while putting down the stakes you have just worked. For example, the order will be: no.2 up, no.1 down; no.4 up, no.3 down; no.6 up, no.5 down. Pull the stakes as they are put down to keep the check tight.

The check weave is started with left hand in position illustrated with fingers holding alternate rushes making room for vertical stakes.



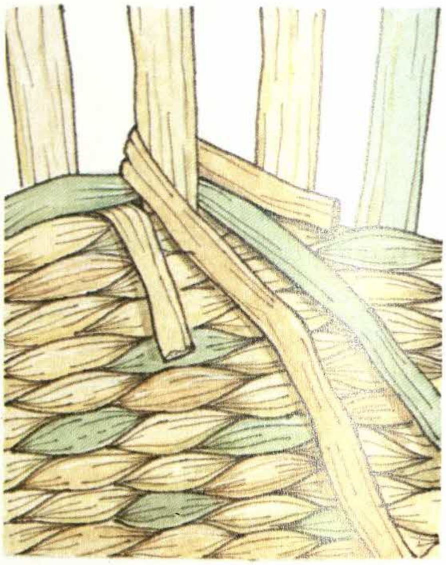
Melvin Grey

☐ Continue until all six vertical stakes are in place and your check weave centre is complete.

Pairing is done in the same way as when working with cane.

☐ Bend one of the weaving rushes not quite in the middle and loop it round the first stake on any side. Pair all the way round twice—left-hand weaver in front of one, behind the next and return to the front. Pull each rush down well at each pairing stroke.

Joining in a new rush. When a weaver has about 7.5cm (3″) left to weave and is in the position to be used next, loop the thin end of the new rush round the stake in between the two weavers. Loop it about 7.5cm (3″) from the end (fig.2).



2. *Joining in a new rush.*

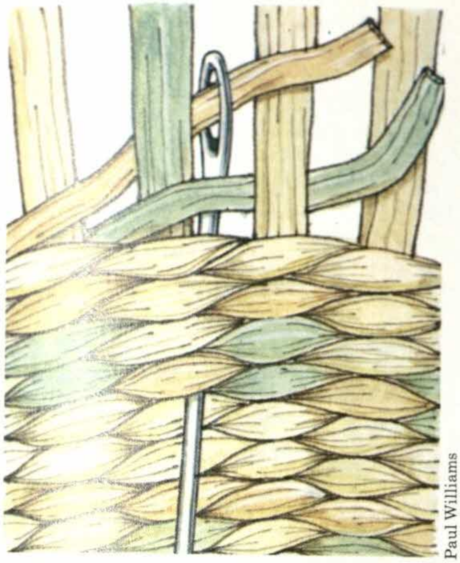
Now both weavers have a long rush and a short end. Continue to pair weaving in the short ends as you go.

If both ends run out together, loop the new one not quite in the middle and place it round the stake between the two short ends. Then once again you have two long ends. The two shorter ends are woven in together with the weaving.

☐ Pair for two rounds, then make sure that all the stakes are central and that they are tight. Pull them into position if necessary. Spread the stakes out like the spokes of a wheel after the second round.

☐ Pair until the mat is 19cm (7$\frac{1}{2}$″) across.

The ends of both weavers are finished off by threading them into the weaving. Push the rush threader through the last four rounds of pairing, just where the pairing finished. Thread the weaver into the eye of the threader and pull it back through the pairing (fig.3).


Paul Williams

3. *Weaver end threaded into the work.*

Repeat with the other weaver. A border is now added to complete the mat. See 'Borders'.

The oval mat

Oval mats are made in the same way as round mats but the stakes are cut into two different lengths. There are fat ovals and long slim ovals—you can make whichever you prefer. In basketry an oval is merely an elongated circle. Some stakes will be longer than others. Allow for borders by adding an extra 10cm (4″) to each end of the stake. The mat measures 28cm x 23cm (11″x 9″) before putting on the border.

You will need:

6 thick stakes 48cm (19″) long.
12 thick stakes 43cm (17″) long.
14-18 weaving rushes.

☐ Place the long stakes close together horizontally on the table. Place your left hand in the centre and lift up the 1st, 3rd and 5th stakes. Place the 1st short rush across the remaining horizontal stakes. Continue to place five more of the short stakes into position to form a check weave.

☐ Turn the work round and place the remaining short stakes into position. This will ensure that the block of check weave is in the centre of the stakes.

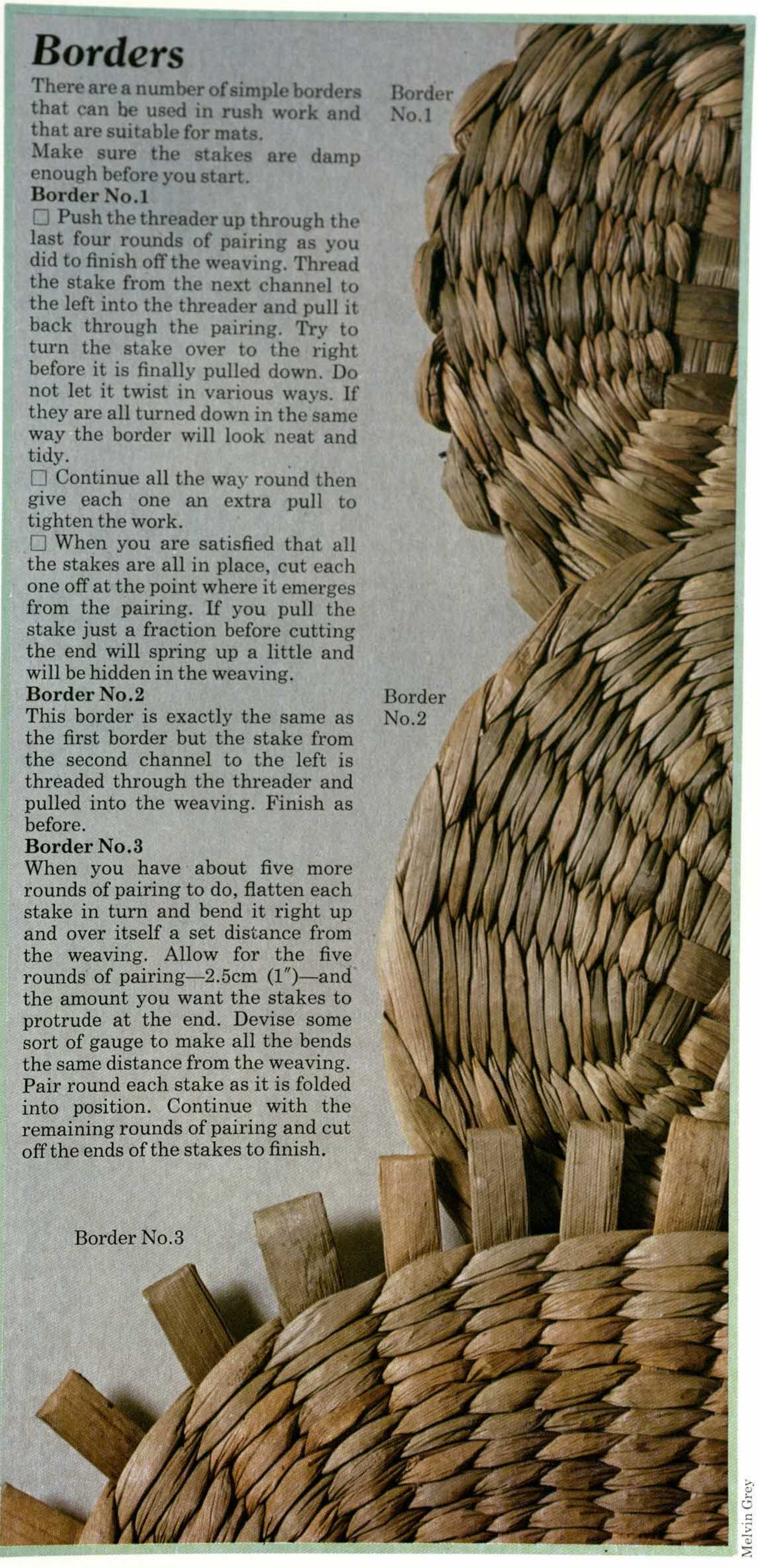
☐ Pair for 5cm (2″) then, if you wish start Border no.3. Continue to pair for a further five rounds and finish off.

☐ If you wish to have one of the first two borders, pair for 7.5cm (3″) before bordering down.

Pressing

When you have completed the mat with its border, its appearance is improved if it is pressed flat.

Place the mat between a newspaper and put some heavy books on top. Leave it overnight. The newspaper will soak up any remaining moisture.



Melvin Grey

Borders

There are a number of simple borders that can be used in rush work and that are suitable for mats.

Make sure the stakes are damp enough before you start.

Border No.1

☐ Push the threader up through the last four rounds of pairing as you did to finish off the weaving. Thread the stake from the next channel to the left into the threader and pull it back through the pairing. Try to turn the stake over to the right before it is finally pulled down. Do not let it twist in various ways. If they are all turned down in the same way the border will look neat and tidy.

☐ Continue all the way round then give each one an extra pull to tighten the work.

☐ When you are satisfied that all the stakes are all in place, cut each one off at the point where it emerges from the pairing. If you pull the stake just a fraction before cutting the end will spring up a little and will be hidden in the weaving.

Border No.2

This border is exactly the same as the first border but the stake from the second channel to the left is threaded through the threader and pulled into the weaving. Finish as before.

Border No.3

When you have about five more rounds of pairing to do, flatten each stake in turn and bend it right up and over itself a set distance from the weaving. Allow for the five rounds of pairing—2.5cm (1″)—and the amount you want the stakes to protrude at the end. Devise some sort of gauge to make all the bends the same distance from the weaving. Pair round each stake as it is folded into position. Continue with the remaining rounds of pairing and cut off the ends of the stakes to finish.

Instant drawing with glue

Drawing with glue sounds like an improbable if not downright foolish occupation, but in fact it is easy to do, adds spontaneity to drawing and, most interesting of all, has a glossy quality and a low relief that makes it look like enamel work. For this reason it is well suited to medallion shapes and wall hangings as well as pictures for framing.

Glue drawings look surprisingly professional even when executed by people who say that they cannot draw. This is partly because the strong thick lines do not require precision and the freedom of drawing with glue is uninhibiting.

Materials

You need glue, paper, some ink or poster paint and a rag or brush for applying it.

Glue. Any glue which comes in a container with a pointed nozzle can be used, eg Evo-Stik Resin W, PVA Multiglue, UHU, etc.

Paper. Although ordinary cartridge paper or card is perfectly suitable a wide variety of papers can be used for glue drawings. The wall hanging shown, for example, is made on corrugated packing paper. Coloured papers also make interesting effects.

Colour. Since the glue is transparent you will usually want to colour the glue lines with inks or poster colours.

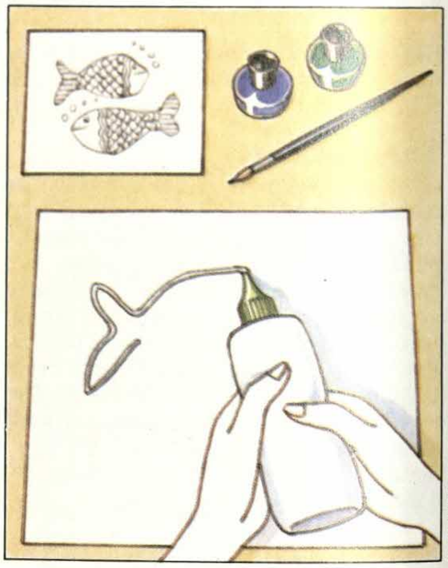
Making a glue drawing

You are more or less forced to draw your picture freehand since the glue is transparent and any pencil marks on the paper will probably show through even when the glue is tinted. Therefore, if you want to work from a design you must work it out on another sheet of paper and then try to copy it to some extent when you begin your drawing in glue (fig.1).

Use the glue with both hands or as a pencil and draw your picture on paper which is absolutely flat, otherwise the glue may run. By varying the pace of your strokes you can change the thickness of the lines.

When the drawing is complete leave it to dry before proceeding to colour the glue.

Colouring. There is great scope here for your imagination and great care is not necessary. Some drawings require little or no colouring and others rather more. Colour can be confined to the glue or spread over larger areas of the paper with paintbrush or rag and more than one colour can be used.



Paul Williams

1. *Glue drawings are made by 'painting' a picture freehand in glue, then colour is added when dry. A preliminary working sketch can be used for reference.*

The fish medallion shown, has been wiped with yellow and blue inks—on both the glue and the paper—and in the areas where the two colours overlap and blend an evocative sea-green has resulted.

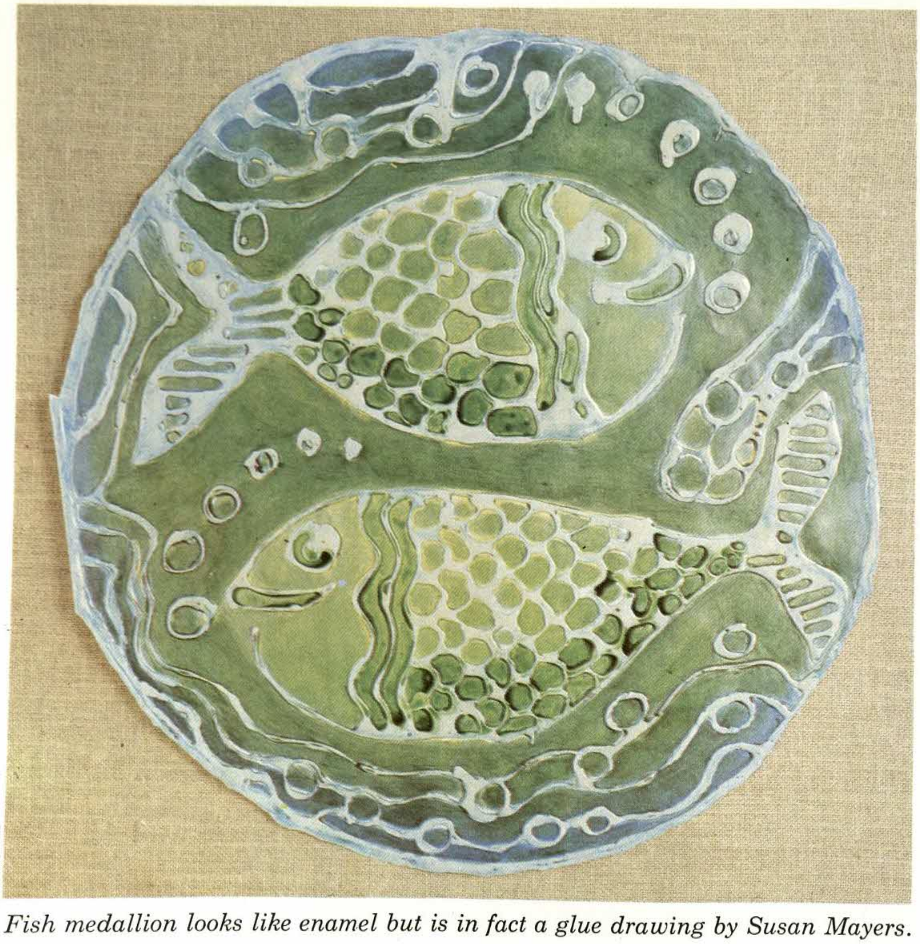
The wall hanging gives the impression of an elegant Chinese scroll. The raised glue picture was 'painted' on ordinary corrugated packing paper. The entire paper and glue were then painted with red poster paint.

Next, gold paint was dabbed on with a paintbrush and then smeared slightly in places with a rag.

Finally, some diluted black poster paint was rubbed on to give a smudged effect.

Impressionistic wall hanging by Kim Birkett has all the elegance of a Chinese scroll. It was made by drawing with glue on corrugated packing paper.

Geoffrey Frosh



Alan Duns

Fish medallion looks like enamel but is in fact a glue drawing by Susan Mayers.

More uses for tumbled stones

Baroque tumbled stones need not be used exclusively for jewelry making, they can also make delightful decorative additions to everyday objects used in the home and office.

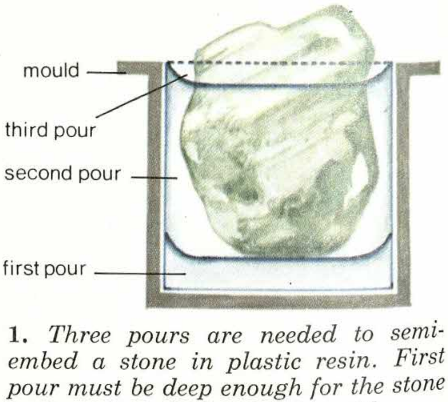
This chapter describes more ways in which tumbled and polished stones can be attractively displayed—and serve a practical purpose.

Clear cast embedding

Everyone has seen dried flowers, shells, coins and other objects embedded in transparent plastic resin to make things like paperweights and bookends. Tumbled stones can also be treated in this way—and very handsome they look too. However, as tumbled stones are pleasant to touch as well as to look at, you can make a pleasing variation by semi-embedding the stone in the resin, so that the top surface of the stone (or stones) is raised.

To semi-embed a stone in resin, follow the detailed instructions supplied with resin and catalyst kits but remember that the open end of the mould will be the top or exposed surface, from which the best facet of the stone will protrude.

Make the first pour sufficiently deep so that, when placed on it, the stone will show above the top of the mould. Add the second pour in the usual way and leave to dry. The surface will remain slightly tacky and, because resin shrinks, it will be convex shaped and just below the top of the mould. To get a proper finish it is necessary to make a third pour. Mix a small amount of resin with a slightly higher proportion of catalyst than usual. Carefully pour or brush this on to the tacky surface surrounding the stone and leave to dry. It will now cure to a smooth finish (fig.1).



1. *Three pours are needed to semi-embed a stone in plastic resin. First pour must be deep enough for the stone to show above the top of the mould.*

Melvin Grey

Left: make paperweights or immerse stones in water—the simplest way to keep tumbled polished stones in gleaming condition. Mix stones for random patterns, graduate in layers according to size or colour, or use one type of stone only.

Self-hardening clays

Stones can also be set quite easily into self-hardening clays such as Das and Cold Clay, which do not need to be fired but harden naturally when exposed to air. These clays can be painted with gouache, poster paints or Indian inks, and manufacturers can supply special clear varnishes for a glossy finish.

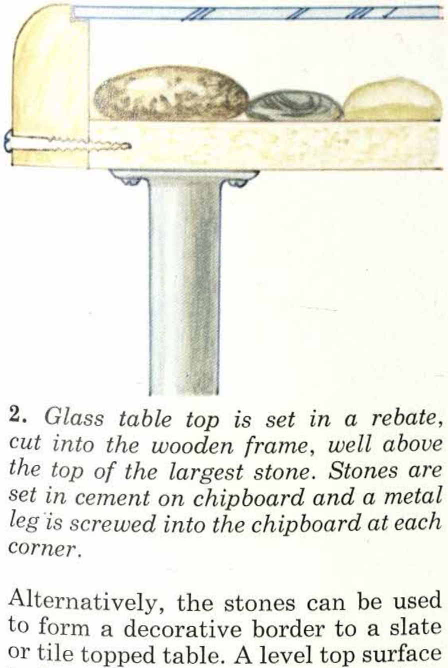
Clay is shaped by hand, of course, so you can choose shapes that you could not make with a mould. A large monogram, for example, would make a highly personalized paperweight. Or you could make an amusing one in the shape of your hand, studding the fingers with stones to look like rings. You could add stones to a dish-shaped piece of clay to make a bejewelled ashtray, or make a doorplate by using chippings to spell out the number or name of your house on a flat clay tablet.

Cementing stones

Stones can also be successfully embedded in cement—to produce anything from a decorative teapot stand to ornamental paving.

Tabletops. In the case of a table top, the problem of producing a flat finish can be overcome in one of two ways.

The table can be designed like a showcase so that the actual table top is a sheet of glass or Perspex. If this sheet does not touch the stones themselves, but is set into a rebate cut into the frame, it does not matter whether or not the surface of the stones is level (fig.2).



2. *Glass table top is set in a rebate, cut into the wooden frame, well above the top of the largest stone. Stones are set in cement on chipboard and a metal leg is screwed into the chipboard at each corner.*

Alternatively, the stones can be used to form a decorative border to a slate or tile topped table. A level top surface to the stones is unimportant here since the central, major, part of the table offers plenty of flat surface on to which objects can be placed safely.

Bond stones (and tiles or slate) on to a sheet of hardboard or blockboard with cement.

Cover the board with an even layer of cement—about 3mm-6mm ($\frac{1}{8}$"-$\frac{1}{4}$") thick. Firmly press the stones into the cement and leave till thoroughly dried. Then clean and grout.

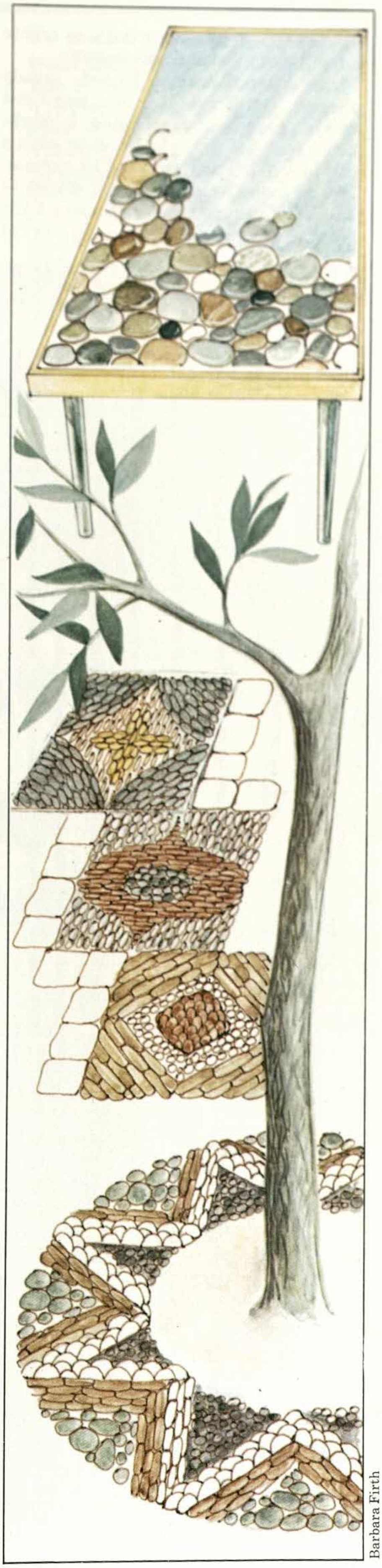
You can either make your own table base or buy a metal table frame from a DIY shop. Choose one with holes drilled into the angle irons so that the table top can be screwed neatly and quickly into position.

Naturally tumbled stones. Although a large area decorated with baroque tumbled stones undoubtedly looks very handsome, it can work out rather expensive. But do not let the thought of high costs deter you from tackling a large area. Naturally tumbled stones can be found along the sea-shore or from a river bed. Worn smooth by a fast running river, or pounded against each other by waves on the beach, these stones—although not precious—are often beautifully coloured and interestingly shaped, and make effective decorations.

Varnished they make a rich-looking decoration but the soft colours of water polished stones look pretty too in their natural unglazed state.

Pebble pavements. In parts of Greece almost every village house has a courtyard and, sometimes, interior rooms paved with local stones. The stones are evenly sized to minimize the discomfort of walking on them, usually sugar almond shaped and laid on their sides in a cement bed. Each courtyard has a different design: the family name, geometric shapes or a symbol, which is 'drawn' in the more unusual black or red coloured stones, against a background of white pebbles. Very simple but very effective—and an idea which is easy to copy.

If you are really ambitious you could cover an entire patio this way, but this form of decoration looks just as good on a small scale. Remove one paving stone and replace it with a pebble mosaic, or surround a tree.



Barbara Firth

Left: naturally tumbled stones are worth collecting from the beach or fast running rivers. Colours and shapes are lovely. Use them as they are or buff with wax to shine, then seal with a coat of varnish. Natural stones are particularly useful for decorating large areas where the use of more precious stones would work out prohibitively expensive. For a patio, choose stones of similar size and shape. Embed large stones deep into the cement so that the top surface of the stones is fairly level otherwise you will find your paving uncomfortable to walk on.

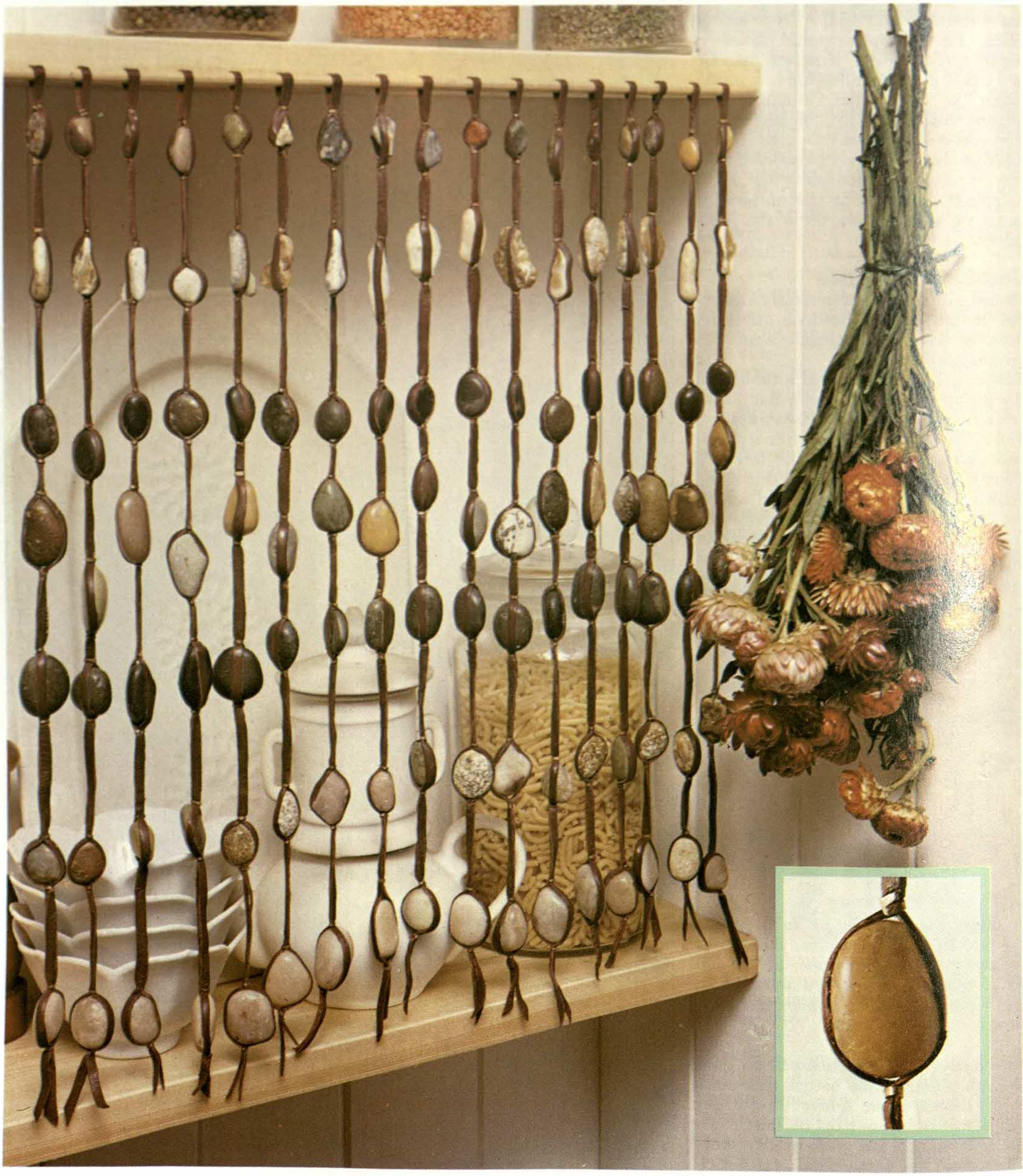
Leather thonging and macramé

Another way in which a collection of stones can prove functional as well as decorative is to use them for bead-type curtains combining the stones with thonging or macramé.

Use polished baroque stones or naturally tumbled pebbles, or both. Pieces of shisha glass (Indian mirror glass) could be used here and there to create a feeling of light and movement.

Make a small curtain to hide untidy shelves. Or, if you live in a small flat where space is at a premium, it might be a nice idea to replace a door with a full-length fringed, bazaar-like curtain. Use as many or as few small stones as you wish. You can use stones at the bottom of your curtain only, or at

Below: leather thonging and beach pebbles were used for this kitchen shelf curtain by Mary Seyd. If you have sufficient time, patience and pebbles, you could make a pretty room divider by the same methods. Inset: detail shows how flat leather thonging is stuck around the stone and secured at top and bottom with a twist of wire.

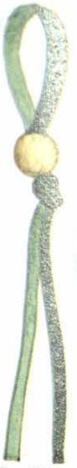


Melvin Grey

intervals down it. Always use your largest stone at the bottom of the curtain to give weight, and be careful to avoid heavy stones at eye level where they could cause accidents.

Mary Seyd

Above: natural tumbled stone necklace. Stones are secured to leather with adhesive and bound at top and bottom with wire—the same method as used for curtain shown opposite.

3


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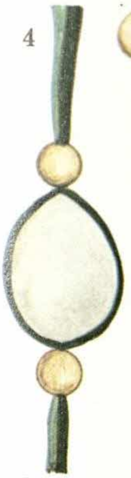

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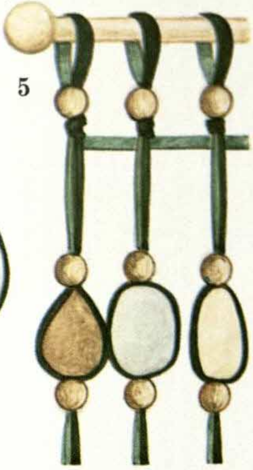


3. *Thread a bead on to double thonging, leave a loop for the curtain rod and make a knot below the bead.*
4. *After an interval, thread a second bead on to the double thonging. Place a stone immediately below the bead. Pull thonging tightly round the stone, using adhesive to stick it, and thread another bead immediately below it for added security.*
5. *Thread the curtain rod through the loops and stick a piece of thonging parallel to the rod just below the top row of beads. This will ensure that the curtain hangs in an evenly spaced manner.*

To make a curtain or wall hanging

You will need:

A rod for hanging the curtain, and a pair of wall brackets.

A piece of leather thonging cut to the length of the rod.

Leather thonging cut into a number of pieces each twice the length you wish the finished curtain to be plus 15cm (6") or more depending on the length of the curtain.

Stones—as many as you wish.

Wooden beads, twice as many as there are stones, pierced with holes just large enough for two pieces of thonging to pass through them.

Epoxy resin adhesive.

☐ Take a piece of thonging and fold it in half lengthways.

☐ Thread both cut ends through one bead and push the bead up the thonging until it leaves a loop at the top large enough to comfortably take the rod from which the curtain will hang. Tie a knot below the bead (fig.3).

☐ Thread a second bead on to both cut ends of thonging and push it up to the point where you want your first stone to be.

☐ Place the stone just below this bead. Spread glue on the inside of both pieces of thonging and draw the thonging tightly either side of the stone.

☐ Thread and push a third bead up the thonging until it rests just below the stone. Pull taut so that the stone is securely sandwiched between the two pieces of thonging and prevented from riding up or falling down the curtain (fig.4).

☐ Continue threading beads and securing stones at intervals of your choice. Then end by threading a single bead on to the bottom of the curtain length and tying a knot.

☐ When all the other double lengths of thonging have been decorated in the same manner, thread the rod through the loops at the top of each length.

☐ To keep the curtain hanging in an evenly spaced manner, glue the piece of thonging equal to the length of the rod and stick it across the curtain, parallel to the rod, just below the top row of beads (fig.5).

☐ Macramé string could be used in place of leather thonging, and, of course, either method could be used for making necklaces and bracelets. Use a twist of wire to secure each stone at top and bottom if unable to find beads which are large enough to thread with two thicknesses of leather thonging yet small enough not to dominate the stones.

Wire wrapping stones

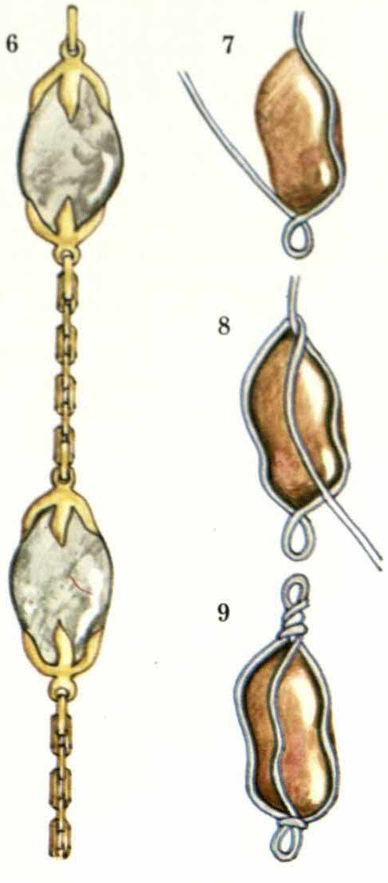
Alternatively, suitably shaped stones could have a bellcap bonded on to each end (fig.6), and be linked to each other by jump rings and chains (see Lapidary chapter 3, page 934). Awkwardly shaped stones unsuitable for gluing to bellcaps can be wire wrapped instead, using the following method:

☐ Cut a piece of wire about 6 times the length of the longest side of the stone.

☐ Leaving about 4cm (1½") of wire at the top, bend the wire around and down one side of the stone, and make a loop at the bottom of it (fig.7).

☐ Bend the wire around and up the opposite side of the stone, across the top, going behind the 4cm (1½") stem and down the third side (fig.8).

☐ Bend the wire one and a half times round the loop, then up the fourth side of the stone and round the stem twice. Cut off excess. Make a loop from the stem. Wrap the end round base of loop once and cut off excess (fig.9).



6-9. *Curtains and jewelry can be made by using bellcaps and chains or —if the stones are too awkwardly shaped to use this method—by wrapping each stone with jewellers' wire as shown above.*

Salvaging old furniture

Wood — renovation 4

Old and second-hand furniture can be used in many ways. If a piece of furniture has been pulled apart and you want to re-use the timber, you would have to start from scratch to construct a new piece of furniture. Obviously this is a big job. It is often possible to salvage an unattractive piece of furniture by separating it into units and re-finishing surfaces to give you a completely different item. A wide range of furniture can be re-used and it is easiest to point out the things to avoid.

Suitable items

The dressing table illustrated was separated into various items but other furniture such as chests of drawers and dressers is also suitable. Wardrobe doors can be re-used—the wardrobe itself is more difficult. If it has a drawer at the bottom then that can be removed from the carcass (frame work)—it really depends on the construction of the wardrobe. Large items such as a wardrobe are best left until you have some experience in this kind of work.

Avoid items of furniture that are damp or have rotting wood, and look out for tell-tale woodworm holes.

The surface finish is not too important as there is such a variety of modern materials with which to restore and improve surfaces. The construction must be sound—open doors and remove drawers to see the inside. Make sure that the structure is intact.

Antiques of any kind are worth more if left intact. If an item is battered, get a professional in to advise or restore it —do not carve it up.

Planning

When considering how to make the best of a fairly bulky item of furniture, think first of how you would ideally like to carve it up. Look at it as a whole from a distance. Then examine it closely to find out what in fact is possible.

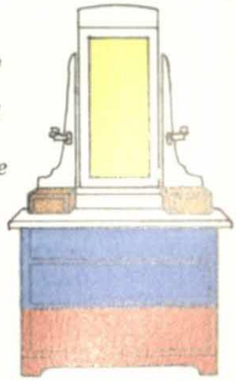
If the item is old you cannot necessarily assume that it is solidly made although the fact that it has lasted so long does indicate a reasonably sound construction.

The dressing table illustrated was an exceptionally good find; made of mahogany it is constructed throughout in hardwood with all the hardware intact. The frame around the mirror was damaged, but as the mirror was still usable a new frame was constructed from strips of softwood.

Carcass construction

Having some idea of what you want from an item of furniture the next step is to inspect the carcass, ie the inside construction or frame which holds the outer surfaces together. Hardwood has never been the cheapest available material, so no matter how old the item is, the broad surfaces seen from the outside are often only panels and not part of the load bearing structure. The most common method of construction produced furniture comprised of a frame with upright members at each corner and, depending on the depth and width, another upright member will be placed halfway along the back or sides as well.

The horizontal members are most likely 19mm (¾") thick and 50mm-75mm (2"-3") wide. They are positioned to lie unobtrusively flat between the drawers. The drawers may fit flush with the horizontal piece or they might have an overhang to hide the horizontal piece when shut. At the frame base, the wood is usually of a heavier section, with some additional reinforcement such as triangular corner-pieces screwed and glued into place. The joints are either mortise-and-tenon



The different colours show how the dressing table was divided into units. The cuts are made so that the bottom of the resulting unit remains intact. New tops are added as required.

Right: after cutting, a top and handles were added to the bottom section of the dressing table to make a telephone seat.

A dressing table salvaged from a junk store before cutting into units.

Paul Williams

Camera Press

Camera Press

and/or dovetail joints. The frame is covered with boards or panels depending on its function.

New surfaces

Once you have decided where to slice the unit—but before you make any cuts—it is wise to work out just what you intend to use to replace the supports that some horizontal members may be giving to two segments in the original unit, but can only give to one of them when they have been separated. The best solution is often a sheet of blockboard or chipboard—veneered or plain—according to its position. Generally, it is a good principle to work from the top, cutting slices immediately under horizontal members so as to leave something strong to support the new sections. If you have to replace a frame member adjoining a panel, remember that panels are never glued into their grooves, but left free to shrink, as all timber does across its grain with time.

Cutting the unit

The bottom is left intact and a new top will have to be added to the slices wherever cuts are made except for the uppermost section.

Shoring spars. Wherever possible, fix temporary pieces to hold the lower section together whilst sawing through its supporting members. These shoring spars can be G-clamped, screwed or nailed into place (so long as the holes will not show in the finished job, of course).

Unless you are going to cover the outside completely with paint, laminate or some other coating, bear in mind that any damage to the exterior surfaces will have to be made good, so try to avoid cracks and splintering as you saw.

Work into panels from each edge, rather than sawing straight through. Draw a trimming knife along the lines to be cut so as to sever the surface fibres before sawing. Since both the sections to be separated are going to be used, make the lines double, say 3mm ($\frac{1}{8}$") apart, and saw between the double lines. Before cutting make sure that there are no screws or nails along the cutting lines.

Use a sharp, fine-toothed, straight-bladed saw such as a handsaw. Make sure the blade has enough depth for the work. (There is much to recommend a portable power jig-saw for this kind of work.)

Saw cuts are best trimmed with a sharp, finely-set plane, though a chisel may be needed in odd corners. The knife guide-lines will prove invaluable as a help in planing down to a clean line—an essential process if you want a really neat join with the new base or top.

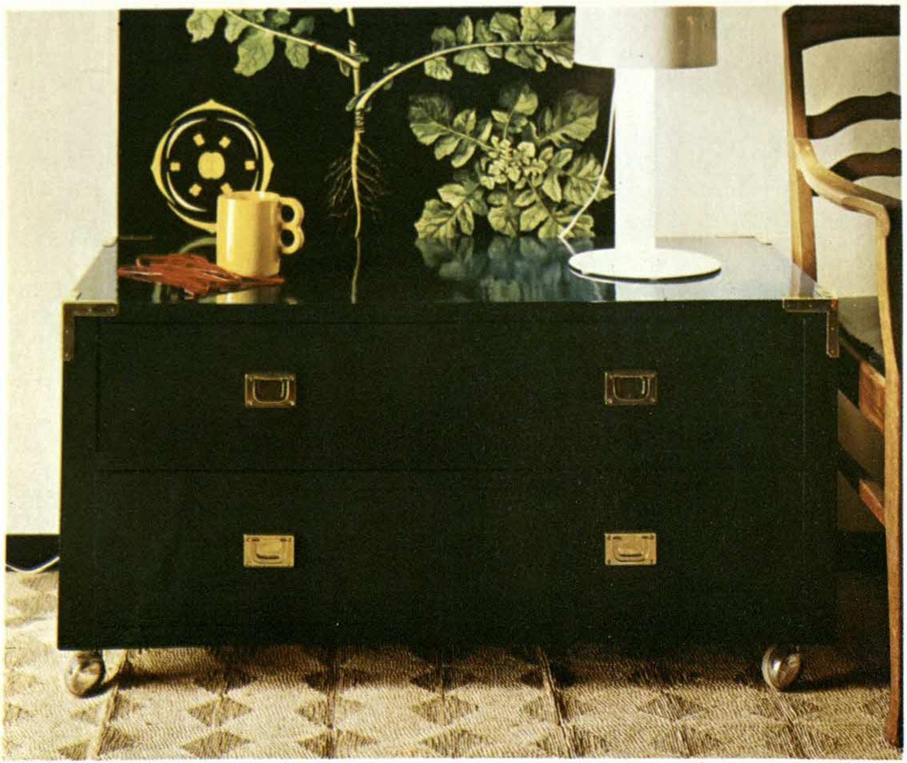
Securing surfaces

There are several methods—some more suitable than others—of attaching new surfaces.

Screwing from the top into the severed frame members. If you screw down a new top, use a screw-sink bit to make the guide holes. These leave a neat counter-bored recess over the sunken screw head, which can be filled with a plug of wood or filler.

Slot-screwing (fig.1) leaves a smooth top surface. Slot-screwing consists of a countersunk-head screw in one of the surfaces to be joined. It is left sufficiently proud to expose an appreciable length of neck, but not enough to protrude more than half way into the other board. In the other board or section make a keyhole-shaped slot as deep as the screw head protrusion. This is done by drilling one hole slightly larger in diameter than the screw head and another next to it about the same diameter as the top of the screw shank. Join the two holes with a small chisel.

The important thing is to ensure that the small hole is drilled where you want the screw head to finish, because the technique of the joint is to place the screw into the large hole, then to tap the board along so that the screw head is forced into the small one sideways, deep in the wood. Do all this before putting on any adhesive between the sections. Carefully knock the joint apart, tighten the screw half a turn, spread woodworking adhesive along all connecting surfaces, replace the slot-screws into their keyholes as before and tap the section home.

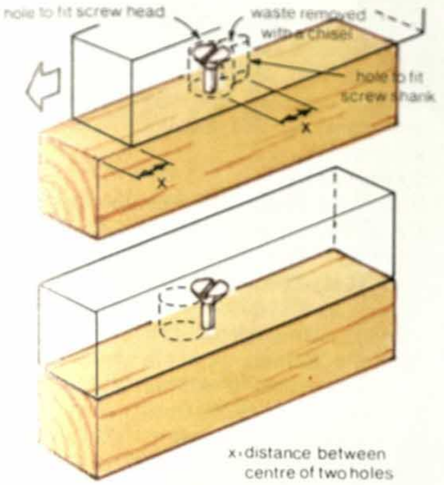


Camera Press

The two upper drawers of the dressing table made into a military chest. The original top was removed and cut to fit flush with the sides. Hardware, including the castors, complete the transformation of the unit.

Camera Press

The two small drawers from top of dressing table stacked to make a desk tidy.


hole to fit screw head
waste removed with a chisel
hole to fit screw shank
x
x
x=distance between centre of two holes

1. *A screw head fits into the large hole and is then forced into the small hole to secure the two bits of wood.*

Obviously for a top across a drawer unit you will need several slot-screws, carefully sited so as to register with each other and allowing for them to slide in the same direction.

The join resulting from slot-screwing does not require any great skill, just method and precision of drilling. It is extremely strong and rigid, combining as it does the benefits of a clamped glue joint and screw fixing.

Edges

Since the units are not at all likely to be of the same size as any standard veneered chipboard or blockboard panel, you will have to re-edge a manufactured board at some time. Veneered chipboard manufacturers usually make a pre-glued, self-adhesive edging strip, which is easy to fix, given clean square edges free from dirt, dust, loose chips and grease. Clean the edges with methylated spirit for the best results.

Wood fillets may be nailed, screwed or glued into place on the raw edges, with the same provisos as for the self-adhesive strips.

Screws or nails used to attach the fillets will have to be sunk and the resulting holes will have to be filled in, so where possible use adhesive. Edging clamps are the best way of holding the fillets whilst the glue sets. Place a clamp at 15cm (6″) intervals and protect board surface with scraps of wood. If edging clamps are not available make a tourniquet out of a pair of old tights and tighten it around the board and the edging strip.

Metal and plastic edging strips can be glued or screwed into place, but look carefully at any you may want to buy, since some of them are intended for commercial application, and may require fairly sophisticated equipment to attach them to a surface.

Castors

Many items are more useful with castors, but remember that castors are designed to take a given weight per set. Castors must therefore be bought to match the total weight of the unit plus the intended contents. It is better to buy castors stronger than you will need as weaker ones will tend to collapse.

The castors are only as strong as their fixings so make sure screws have adequate length to anchor them into a solid section of timber. If necessary, screw and glue thick corner pieces on the underside of the unit on which to mount the castors.

Hardware

Some hardware, such as hinges or drawer handles, may have to be remounted or replaced. Unless it is the lay-on kind and can be screwed directly on to the surface, a new recess may have to be cut to house the hardware.

Draw carefully round the piece of hardware exactly where you want to place it. Use a hard sharp pencil for this, or an angled knife point. Cut into the wood to a shallow depth all round using a chisel. Do the outline first and then remove the waste.

If you are replacing a mirror make sure that the joints of the frame are rigid and secure. Metal brackets can be added to the back to hold the frame in position.

Finishing

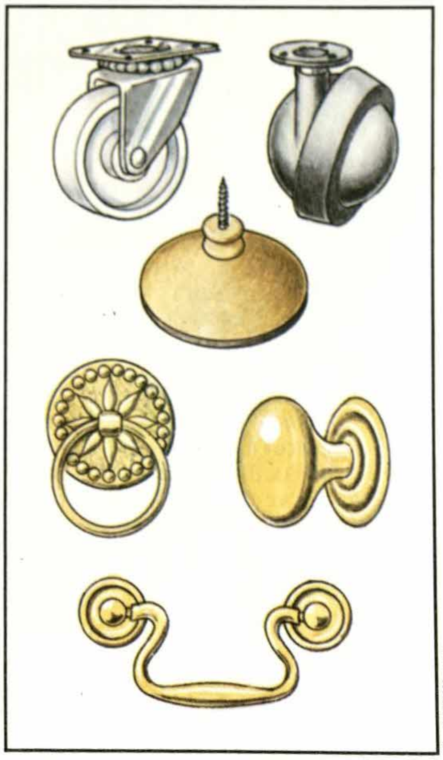
The units can be painted, stained or varnished. Use wood filler to fill in any surface holes or cracks before applying the final finish.

Camera Press

The mirror re-framed with strips of softwood. The frame is constructed with halving joints.

Camera Press

One of the brass candle holders used as a wall decoration.


Paul Williams

Hardware: a few suitable examples from the wide variety of commercially available castors and handles.

Hand lettering in craft work

Design know-how 51

Ever since the beginning of civilization men have found ways of communicating with each other graphically—first by the crudest pictures drawn in mud on the walls of caves and then by means of lettering or writing of one sort or another.

Early forms of writing

One very early form of writing was that developed by the Sumarians in 4000 BC. This was done with a sharpened stick impressed into a cake of soft clay which was then allowed to harden. The marks made in it were wedge shaped and thus became known as cuneiform. At this time the Egyptians were also using a form of writing, carving pictures into stone, each picture representing an object or idea. They later wrote with sharpened reeds on papyrus—which was the first paper, made by beating reed stems flat and interweaving them like a mat.

By this time using symbols instead of pictures to record ideas or information had developed, which was the beginning of writing as we know it today. By the first century BC, the Romans had developed a highly sophisticated, beautifully proportioned style of lettering which is now called Roman capitals. They used this form of lettering mainly for inscriptions on architecture.

Throughout the Middle Ages various styles of writing grew from one another. Capital and small letters developed and sentences and paragraphs appeared along with the beginnings of punctuation.

In the ninth century a particularly clear hand was used in books written for the emperor Charlemagne. This was revived in modified form at the end of the 19th century by master calligrapher Edward Johnston and became known as the 'Foundation Hand'. In the 16th century in Italy, scholars originated a kind of writing which was beautiful to look at, easy to read and quick to write. This is called italic.

All through the ages lettering has been decorated in colour and often with gold which causes the page to light up or be 'illuminated'. See photograph for an example of a 14th-century illuminated manuscript.

In the early Middle Ages books were used mostly for religious purposes: prayer books, books of psalms for instance, and religious treatises for scholars. But as people other than clergy began to learn to read and write, books were written on a much wider range of subjects such as herbals, books on botany, books on cookery, astrology, good manners and even the art of writing and illuminating.

Today with modern printing techniques it is no longer necessary to write signs and books by hand, but the art of hand-written lettering is still very much alive. The next few chapters will discuss the different techniques used in hand lettering in craft work. Two separate areas will be covered—sign writing and calligraphy.

Sign writing

Sign writing involves the careful drawing of characters (on graph paper at first) to exact geometric proportions which can then be painted, carved, embroidered etc. The chapters on sign writing will show you how to draw Roman capitals, the style of lettering developed by the Romans in the first century BC.

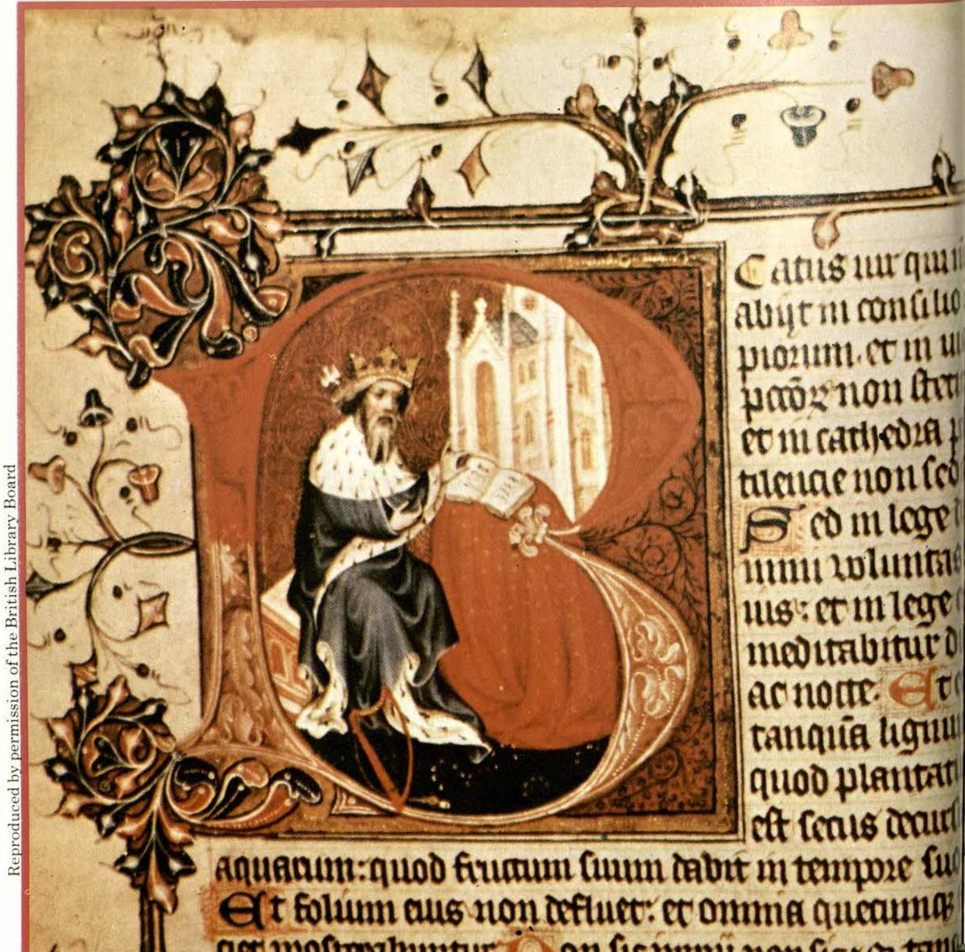
Calligraphy

The word calligraphy comes from the Greek *kalli graphos* meaning beautiful writing. This involves writing in special styles such as the Foundational Hand and italic styles mentioned already, using special types of nibs. Unlike the Roman capitals these letters must be written 'freehand' with smooth flowing strokes, without the aid of graph paper and rulers, though you can use lined paper to help you get the letters the right height.

Calligraphy can be used for bookplates, family trees, greetings cards, bottle labels, table mats, to make small books on topics that interest you, or simply as your everyday handwriting.

The Roman capitals can be used for writing signs, notices, posters, or as stencils for engraving or embroidery.

This is a photograph of a detail from an illuminated manuscript of the Bible made in England during the reign of Richard II in the late 14th century. The first letter of each chapter of this Bible has been highly decorated with floral and pictorial motifs. This letter B from the Book of Psalms shows both floral and pictorial decoration.



catus uir qui
abijt in consilio
piorum. et in u
pccõr non stet
et in cathedra p
tilencie non sed
Sed in lege
mini voluntas
ius: et in lege
meditabitur d
ac nocte. Et
tanquã lignu
quod plantat
est secus decur
aquarum: quod fructum suum dabit in tempore su
Et folium eius non defluet: et omnia quecumq

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Creative ideas 51

Tube necklaces

These necklaces are made from clear plastic tubing used for syphoning and as long as the tube ends are well plugged they can be filled with a multitude of objects.

Section tube necklace

40cm (16") of 12mm (½") diameter tube.

25 10mm (⅜") diameter round beads. 28gm (1oz) seed beads.

Black round cord elastic.

Cut tube into eight 5cm (2") pieces. Cut eight pieces of elastic 6.5cm (2½") long. Thread three large beads on each piece of elastic, knot each end to secure beads. Plug a tube firmly with one of the threaded beads. Hold tube upright and fill with seed beads to within 6mm (¼") of tube end (fig.1) then add next bead plug. Continue this until you have eight tubes filled with beads. For the final plug you will need a bead with an elastic loop. Cut a piece of elastic 8cm (3") long and knot two ends together. Thread double elastic through bead and make a knot at base of loop close to the bead.

Single tube on seed bead string

One piece of 12mm (½") diameter tube 6.5cm (2½") long. 28gm (1oz) seed beads. Two 10mm (⅜") diameter round beads.

One nickel screw clasp, straw needle, nylon thread.

Double thread the needle to length required and knot one end of nylon thread to the clasp eye.

Thread on seed beads to a 20cm (8") length, put needle through a large bead and through tubing.

Push bead into tube then hold tube upright and fill tightly with seed beads. Thread needle through remaining large bead and push bead into end of tube. Continue threading seed beads until the two lengths are equal. Knot thread to remaining clasp eye.

Glitter plait

Three pieces of 4mm (⅛") tube 51cm (20") long.

Six tiny bugle beads.

Green and silver glitter.

Two pieces of 12mm (½") diameter tube 3cm (1¼") long.

Three 10mm (⅜") diameter round beads.

Black round cord elastic.

Plug one end of each piece of thin tube with a bugle bead. Make a small paper funnel and pour green glitter into two of the tubes and silver into the third. When full plug remaining ends with bugle beads.

Push three ends of the filled tubes into one piece of large tube. Ask a friend to hold this end and plait tubes. When finished plug remaining three ends in the other piece of large tube (fig.2).

Close the open ends of the large tubes with beads. Knot two beads together with elastic for the one tube and make a loop for the other end as for the section tube necklace.

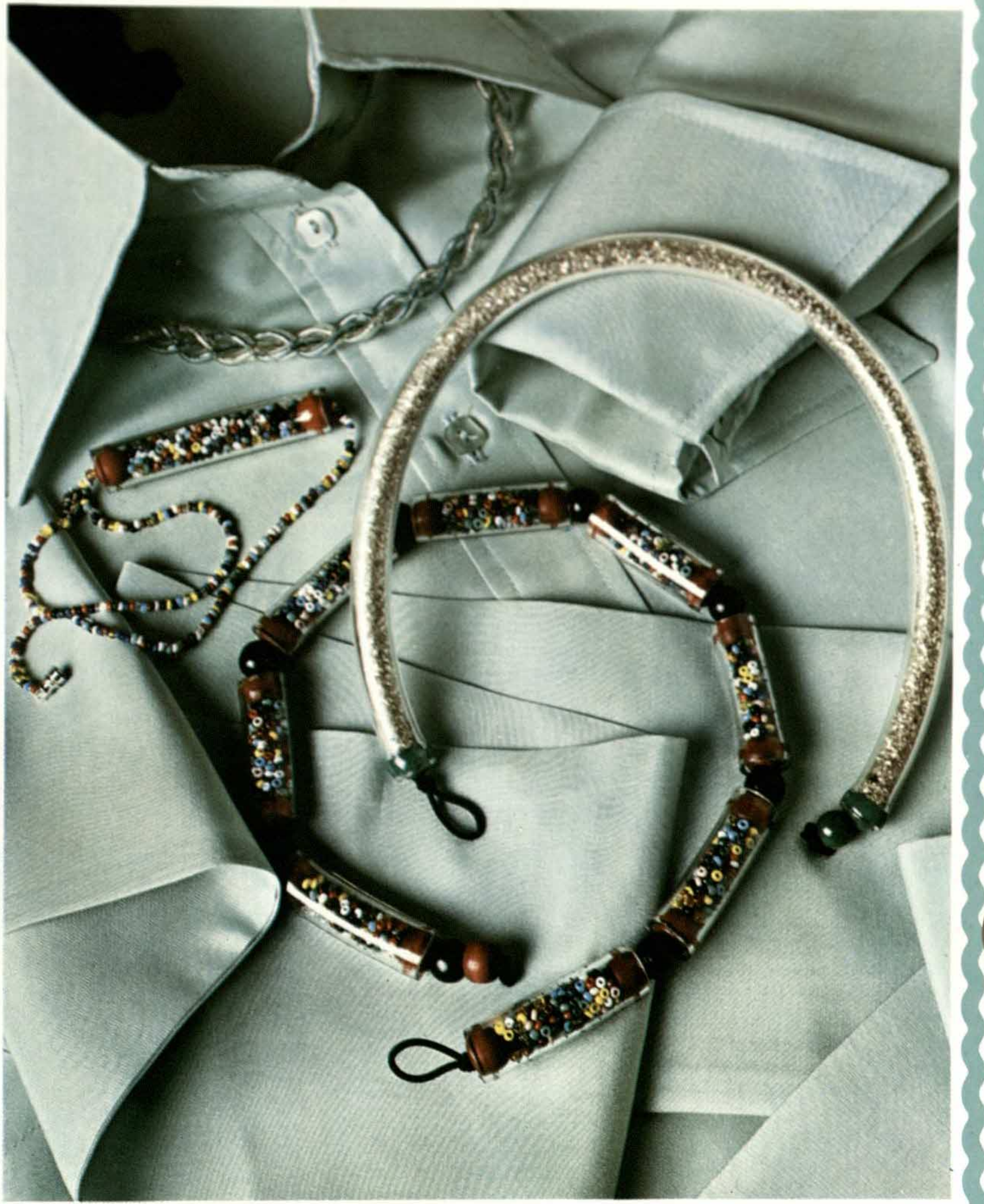
Glitter choker

Length of 12mm (½") diameter tube to fit neck.

Three 10mm (⅜") diameter round beads, and glitter.

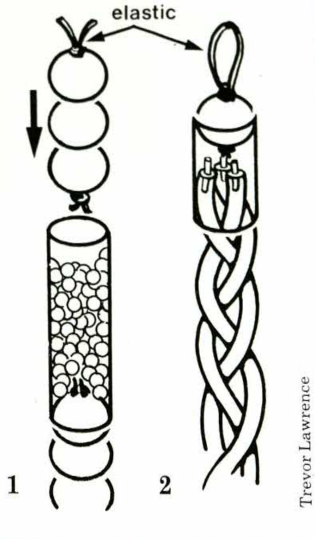
Black round cord elastic.

Knot two beads with elastic. Plug one end of tube with one of the beads. Hold tube upright and fill with glitter. Plug the other end with a bead and elastic loop as for the section tube necklace.



Alasdair Ogilvie

Necklaces by Kay Cunliffe. 1 and 2 show construction.



Trevor Lawrence

Designing string pictures

Picture making is surprisingly easy with pin art and it does not matter if you are not an artist in the usual sense of drawing and painting, for you can still produce some most attractive and unusual effects.

Designing your picture

The subject. The essential element for success in picture making with pins is the subject matter. It must be of a simple, clear shape which will lend itself to expression by this method—it does not matter if you have to stylize the shape as long as it will still be recognizable. Think of the shapes that children like to draw—animals are always popular, as are houses, ships, boats and cars. All these have clear shapes which can be produced easily with pin art and they do not require a lot of elaborate detail to show what the subject is.

Making a sketch. When you have chosen your subject, sketch it roughly on to paper, modifying and simplifying the outlines if necessary to make them into shapes you know you can produce (for curves from straight lines, see Pin art chapter 2, page 292).

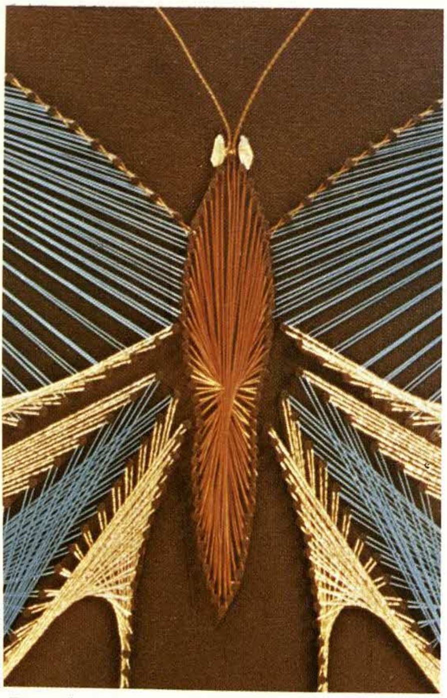
You may need to do several sketches and variations of your subject before you are completely satisfied.

The yarn and colours. At this stage you should think about the type of yarn and colours you wish to use. Before buying anything, check if there are any remnants left from other projects which could be incorporated into the design. A small piece of knitting, crochet or embroidery yarn might provide the different texture or colour your picture needs.

If you are making an animal you might wish to use beads or pieces of wire to form features, such as eyes or antennae. Think how you could combine colours or textures to give an impression of movement or distance. By using two tones of one colour, for example, the brighter tone will appear closer than the softer one. On a wheel you could show movement by working first round the circle with the lighter tone and then filling in between with the deeper tone.

Don't be afraid to experiment—it takes only a few minutes to undo and replace an area if it does not work as you hoped and the yarn can be reused in another way or in a future project.

Making a pattern. When you are satisfied with your sketch, draw it to the required size on graph paper (for enlarging designs see Design know-how chapter 4, page 112). Mark in the positions for the pins with dots—the lines of the graph paper will help you position them accurately on straight lines although you will have to use a protractor to divide up curves.



Dick Miller

Detail of the gold and turquoise butterfly opposite, showing the intricate threading of the body.

It may help to use different colours for drawing the threading if the pattern is complicated with strands crossing in several directions.

Transferring the design. Prepare the foundation board by painting or by covering with fabric. Lay the graph pattern on to the board and secure it in each corner with drawing pins or masking tape.

Hammer the nails through the paper in the required positions and then tear away the paper carefully.

Alternatively, if you wish to save the pattern, punch holes through the paper with a stiletto (or similarly sharp pointed instrument) in the required positions and remove the paper. Hammer the nails into the holes using a depth gauge to make sure they are the same height (see Pin art chapter 2, page 292).

Gold and turquoise butterfly

A butterfly is an ideal subject for pin art because it is the kind of shape which is easy to draw and it can be worked in bright, life-like colours.

You will need:

Plywood or chipboard of required size for foundation.

Emulsion paint for background, and brush.

Graph paper and drawing pins.

Nails, about 418, 15mm (½″) and two 5cm (2″) long.

Gold thread, one ball.

Crochet cotton, two reels turquoise.

Fine soft copper wire (for body and antennae).

Trimming or beads (for eyes).

☐ Using graph paper, enlarge design to required size (Design know-how chapter 4, page 112). Mark the positions for the nails and label them as shown in the diagram overleaf.

Positioning the nails. Place the graph paper on to the foundation board and secure the corners with drawing pins. Transfer the design and hammer in the 5cm (2″) nails at position B on both wings and the 15mm (½″) nails in the remaining positions.

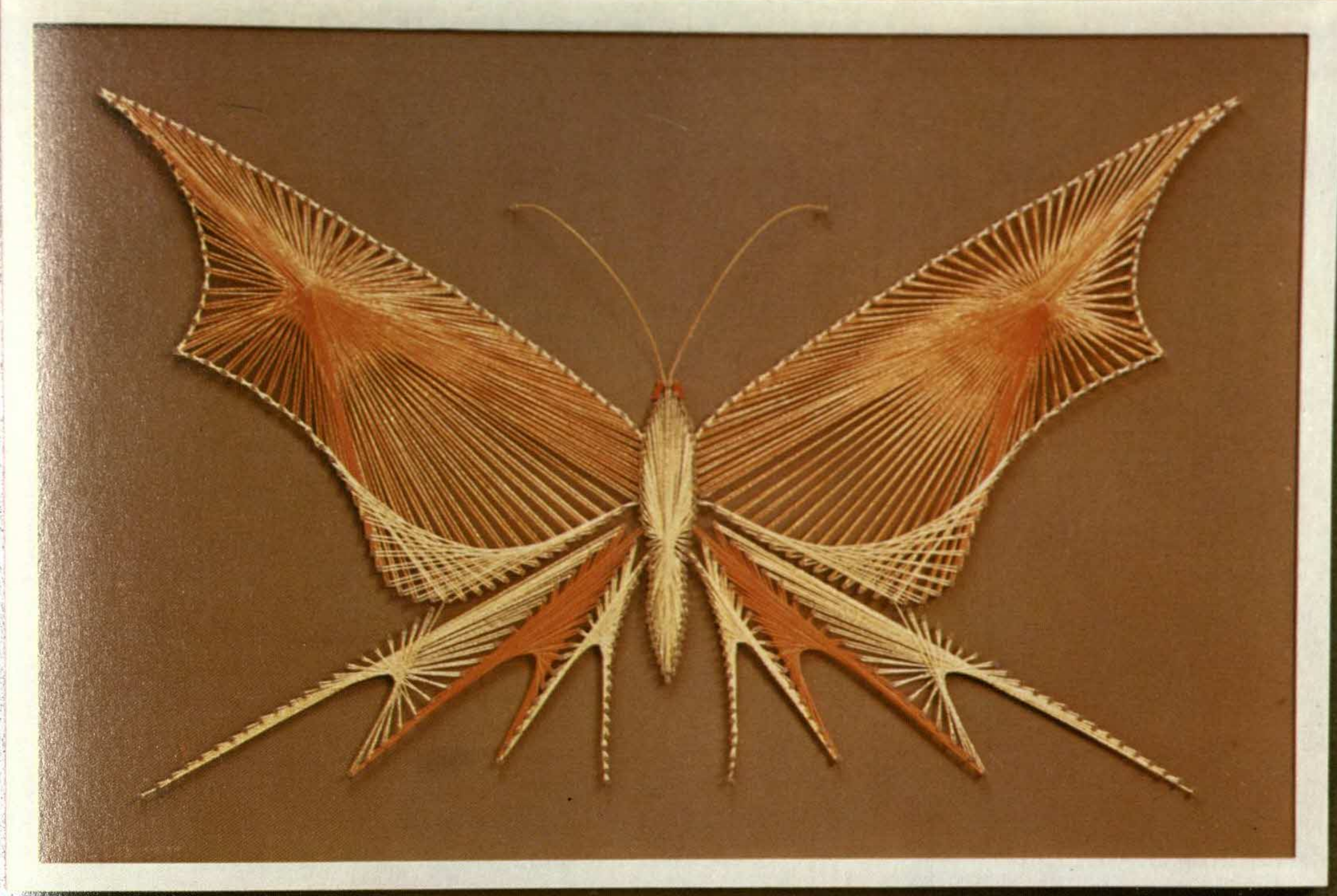
Painting the foundation. Paint the foundation board and nails with the emulsion and leave to dry. Apply a second coat with a stippling movement so that no brush marks are left. Leave to dry.

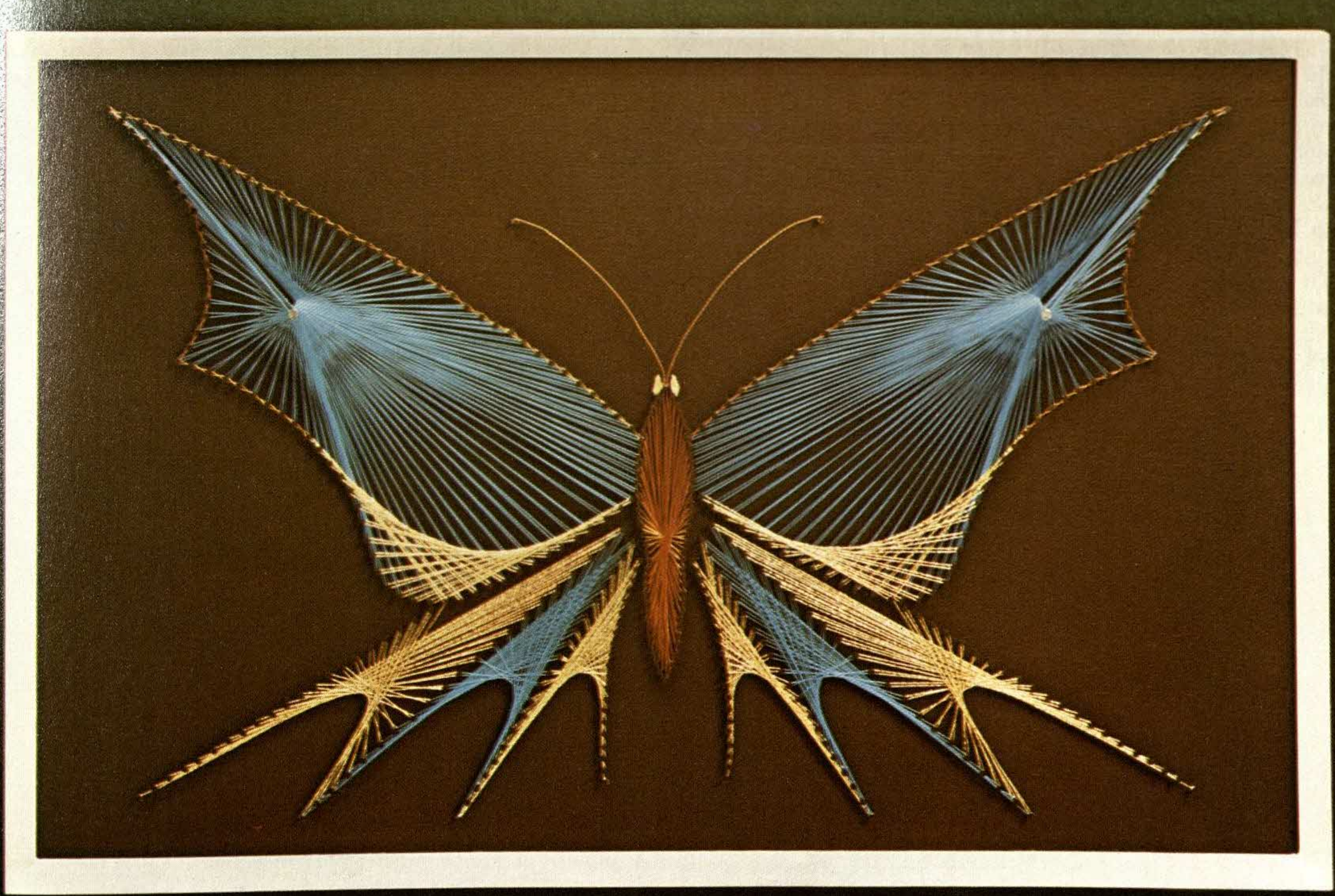
Threading the design. Using the turquoise thread double by working from two reels, start at position A1 and work the left wing as described in the diagram overleaf. Repeat in mirror image on the opposite wing. Complete the threading of the lower wing with gold and turquoise thread and thread the body with copper wire.

Fixing the antennae. Bend the copper wire in half and twist round G1. Take each end and twist round H. Leave enough wire for the antennae to stand out from the board.

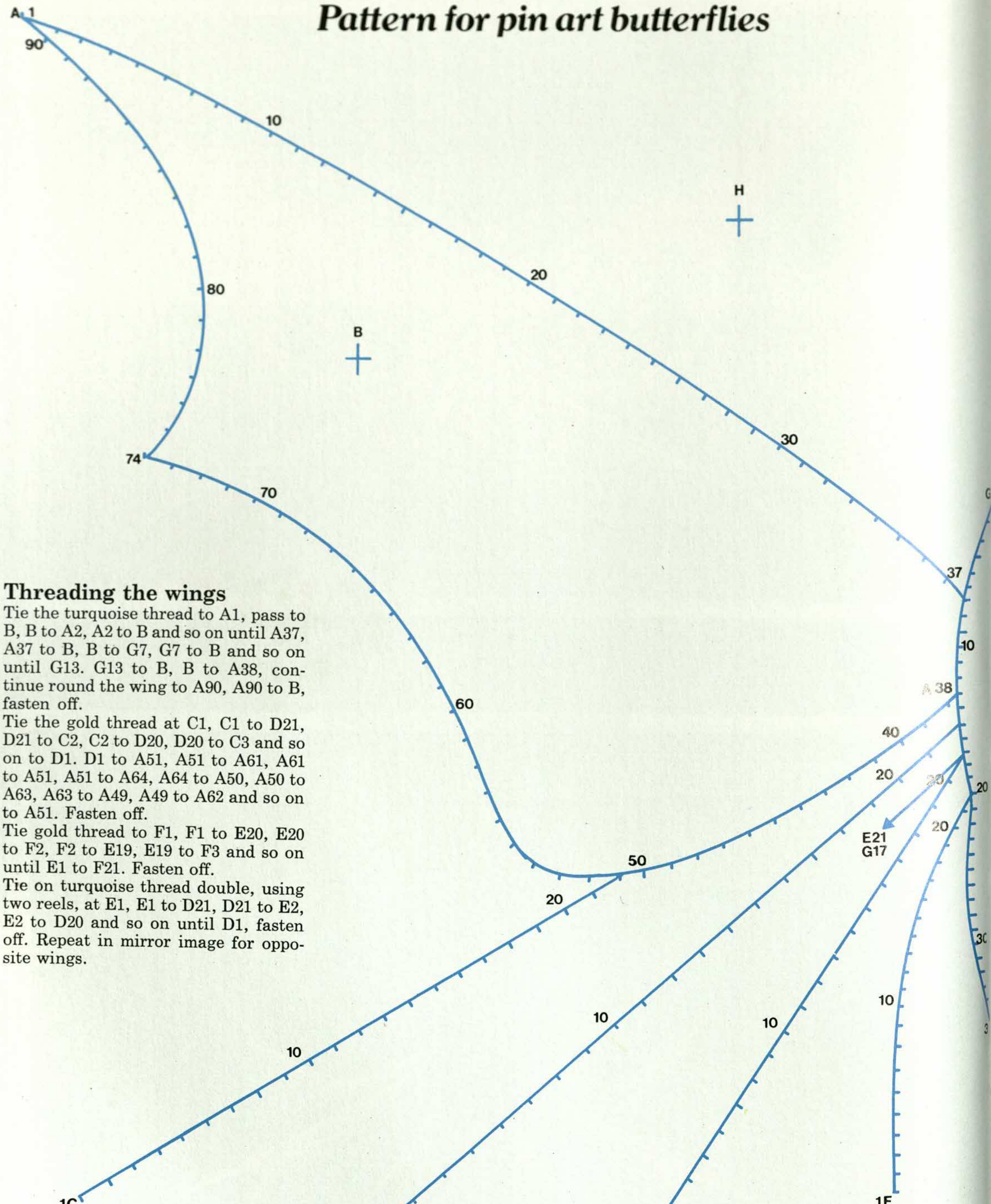
The eyes. These were made from dressmakers' trimming, such as daisy petals, and stuck in place. Alternatively you could use beads.

Top: flame-coloured thread over gold thread for the wings gives an impression of movement to this butterfly designed by Joan Hall. Below: variation on the design in which turquoise thread is used for the wings and the body is threaded with fine copper wire.





Pattern for pin art butterflies



Threading the wings

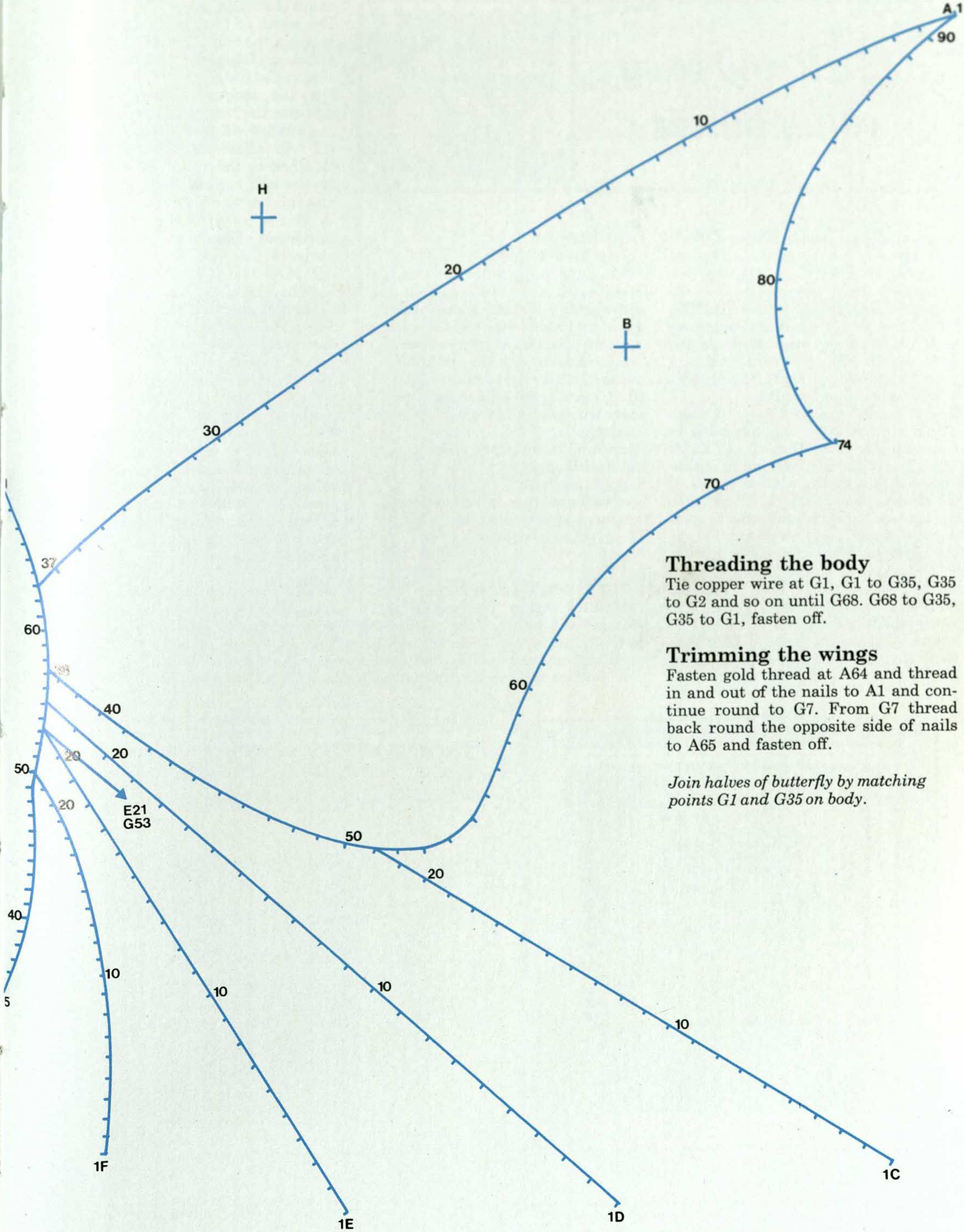
Tie the turquoise thread to A1, pass to B, B to A2, A2 to B and so on until A37, A37 to B, B to G7, G7 to B and so on until G13. G13 to B, B to A38, continue round the wing to A90, A90 to B, fasten off.

Tie the gold thread at C1, C1 to D21, D21 to C2, C2 to D20, D20 to C3 and so on to D1. D1 to A51, A51 to A61, A61 to A51, A51 to A64, A64 to A50, A50 to A63, A63 to A49, A49 to A62 and so on to A51. Fasten off.

Tie gold thread to F1, F1 to E20, E20 to F2, F2 to E19, E19 to F3 and so on until E1 to F21. Fasten off.

Tie on turquoise thread double, using two reels, at E1, E1 to D21, D21 to E2, E2 to D20 and so on until D1, fasten off. Repeat in mirror image for opposite wings.

Trevor Lawrence



Threading the body

Tie copper wire at G1, G1 to G35, G35 to G2 and so on until G68. G68 to G35, G35 to G1, fasten off.

Trimming the wings

Fasten gold thread at A64 and thread in and out of the nails to A1 and continue round to G7. From G7 thread back round the opposite side of nails to A65 and fasten off.

Join halves of butterfly by matching points G1 and G35 on body.

Quick and easy roller blinds

Cloth — sewing 15

By making your own blinds in a fabric that matches or contrasts with your curtains and covers, or to match the wallpaper, you will achieve a co-ordinated look to your room. Tie-dye, batik and fabric crayon designs on cotton would make original blinds and fabrics with large pictorial scenes or very large designs are often best as blinds rather than curtains.

Roller blinds are very easy to make using a roller blind kit, available in roller lengths from 61cm (2') to 2.75m (9'). The blind can be hung either inside or outside the window recess. If the recess is deep, hang the blind inside it, if the recess is shallow or the window narrow, hang the blind outside. Make the blind as wide as the window frame will allow—because if it is only fractionally wider, it will be sucked in and out by the breeze when the window is ajar and the edges of the blind will be spoiled. Before buying your kit check that the brackets are suitable for hanging from the position required.

Equipment

You will need: a roller blind kit containing wooden roller the required length or longer, and fitted at one end with a spring; metal cap and special lipped nail which fits on to the other end; two metal wall brackets, one slotted and one with a round hole; wooden lath for the bottom of the blind; plastic cord holder and cord; acorn with cap and several tiny screws and tacks.

Fabric and matching thread.

Blind stiffening spray.

Saw and hammer.

Screws, Rawlplugs and screwdriver.

Scissors and tape measure.

Bias binding if required.

Pins.

Fabric requirements

For blind inside the recess (fig.1). Measure the width of the recess. The roller should be cut 2.5cm (1") smaller than this measurement to allow for the pins and brackets to be fitted at each end of the roller.

The width of the fabric should be the same as the roller before the pins are attached plus 5cm (2") if turnings are required at the sides.

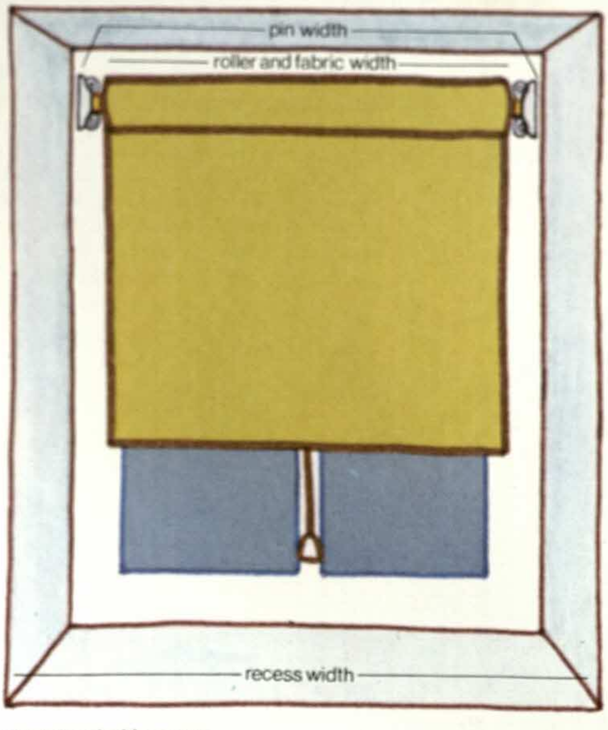
For the length of fabric required measure the height of the recess from the window sill to the top. Add 30.5cm (12") to allow for the fabric to be attached to the roller at the top and for the lath casing at the bottom; this also allows the fabric to cover the wooden roller when the blind is down.

For blind outside the recess (fig.2). Measure the width of the recess and add 15cm (6"). Cut the roller to this length. The roller will extend beyond the recess at either side by 7.5cm (3"). The width of the fabric should be the same as the roller plus 5cm (2") for side hems if required.

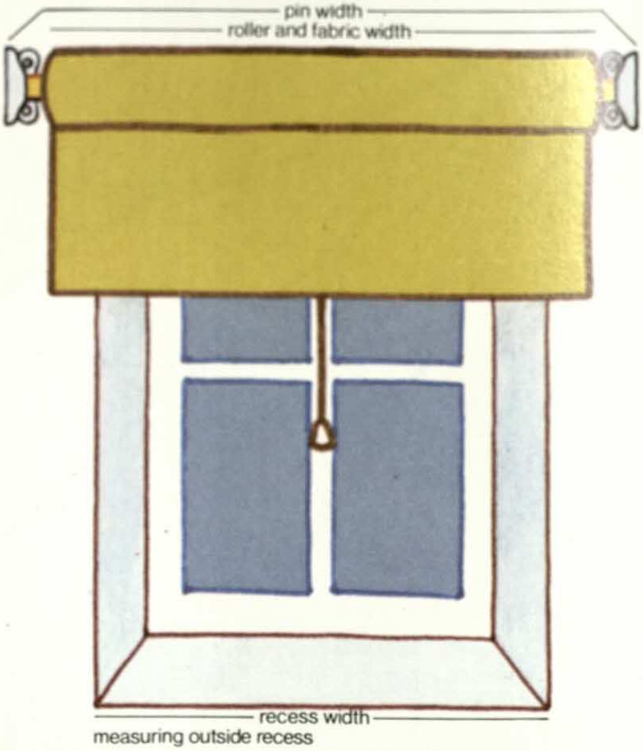
The finished blind should be placed 7.5cm (3") above the recess and hang 7.5cm (3") below the recess.

For the length of fabric required, measure the length of the blind required and add 30.5cm (12"). This allows for the fabric to be attached to the roller at the top and for the lath casing at the bottom; it also allows the fabric to cover the wooden roller when the blind is down.

This original way of using a roller blind is also very practical. The roller blind gives privacy during the day, and the matching lined curtains can be pulled over the door in the evening for extra warmth and luxury.



1. *Roller blinds fitted inside the window recess.*



2. *Roller blinds fitted outside the window recess.*

Coral Mula

David Levin

Choosing the fabric

Fabric for a roller blind should be firm and closely woven. Holland (a stiff linen) is widely used and available in many widths and colours. The main advantage of using holland is that it can be trimmed to the correct width and does not fray, so you need not hem. Closely woven fabrics such as cotton and canvas can also be used although you will need to make side hems. If you use a special blind stiffening spray hems are not necessary. PVC fabric in strong colours and patterns is ideal for the kitchen or bathroom; if you use this fabric the sides should be hemmed.

Cutting the fabric

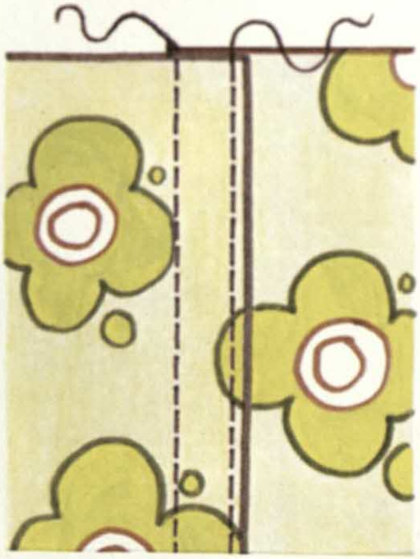
The fabric must be cut accurately and the grain of the fabric must be straight so that the blind hangs well and rolls up smoothly without puckering. To straighten fabric pull out a thread and cut along this line or measure accurately from the selvedge, mark with pins and cut out.

If you have to use more than one width of fabric, to get the size required, add extra fabric to each side of the full width so that a centre seam is avoided. Should the pattern go into the selvedges join each half section to the sides of the main piece by overlapping the selvedges for 1.3cm (½") and machine once down each edge (fig.3).

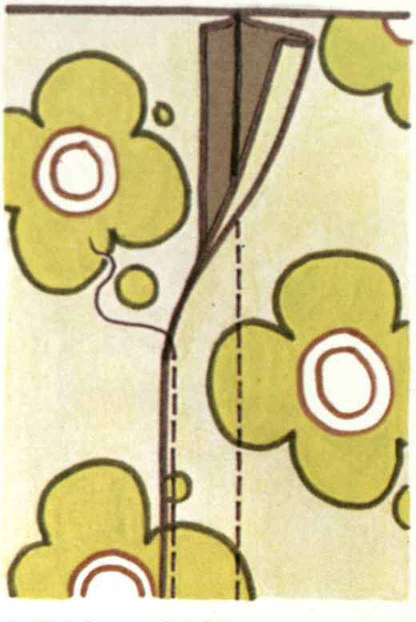
If the pattern does not extend across the selvedge or the selvedges do not match each other, trim them and then join the pieces with a flat fell seam (fig.4). Press well on both sides.

Making the blind

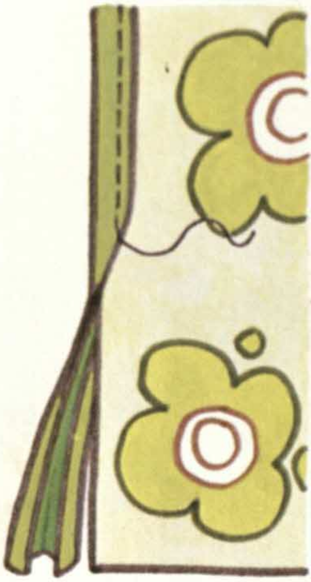
☐ Cut out the fabric to the correct size. If the edges need finishing either bind them with bias binding or hem the sides. To bind the edges place the edge of the blind to the centre of the binding and then fold over the sides of the binding equally, tack and machine stitch through all thicknesses (fig.5). To hem the sides fold over 2.5cm (1") on to the wrong side along both edges, press and tack. (For PVC fabric crease the fold and hold in place with adhesive tape, as the holes made by the needle when tacking will not close up when the tacking is removed.) Machine stitch using a large zigzag stitch and positioning the raw edges in the centre of the stitch (fig.6). Alternatively, raw edges can be neatened by hand and



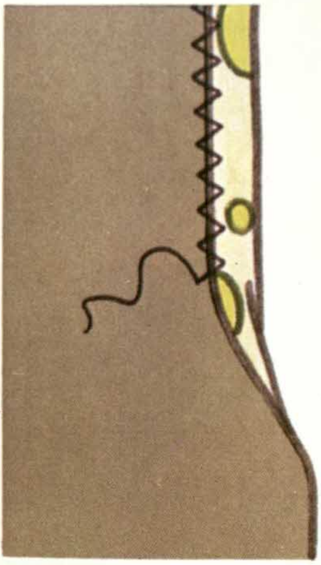
3. *Selvedges overlapped and stitched.*



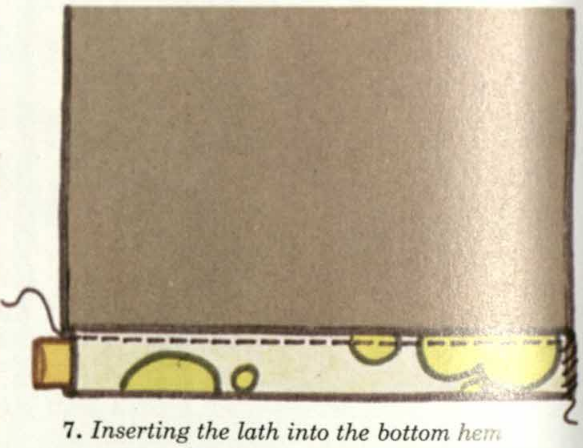
4. *Stitching a flat fell seam.*



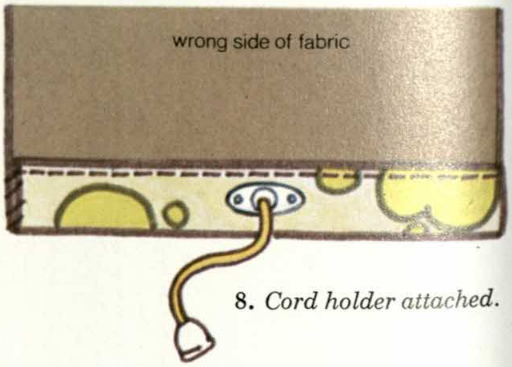
5. *Binding the side edges.*



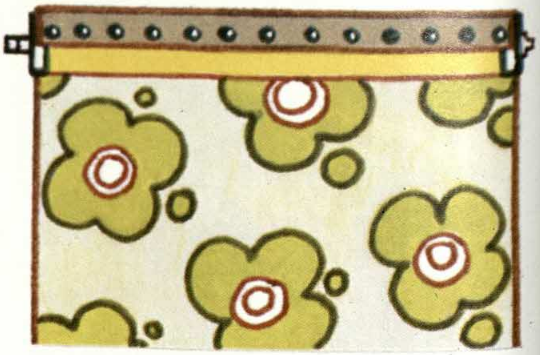
6. *Stitching the side hems.*



7. *Inserting the lath into the bottom hem*



8. *Cord holder attached.*



9. *Fabric tacked to roller, spring on left.*

Coral Mula

then straight-stitched by machine.

☐ To make the lath casing along the bottom edge turn under 1.3cm (½") on to the wrong side. Turn under another 4cm (1½") and machine stitch close to the first fold.

☐ Cut the lath 1.3cm (½") shorter than the fabric width and insert it into the hem. Stitch up the openings at the sides (fig.7).

☐ Thread the cord through the holder, knot to secure and screw the holder to the centre of the lath so that the cord hangs down (fig.8).

Stiffening. Before attaching the fabric to the roller, iron and then spray with the blind stiffening spray. Spray fabric on both sides working in a well ventilated room. Hang fabric up to dry.

Assembly. Following the manufacturer's instructions assemble the roller and the end pins. Screw the brackets into place. If the blind is to go inside the recess allow enough room above the brackets to give clearance for the fabric when it is rolled up.

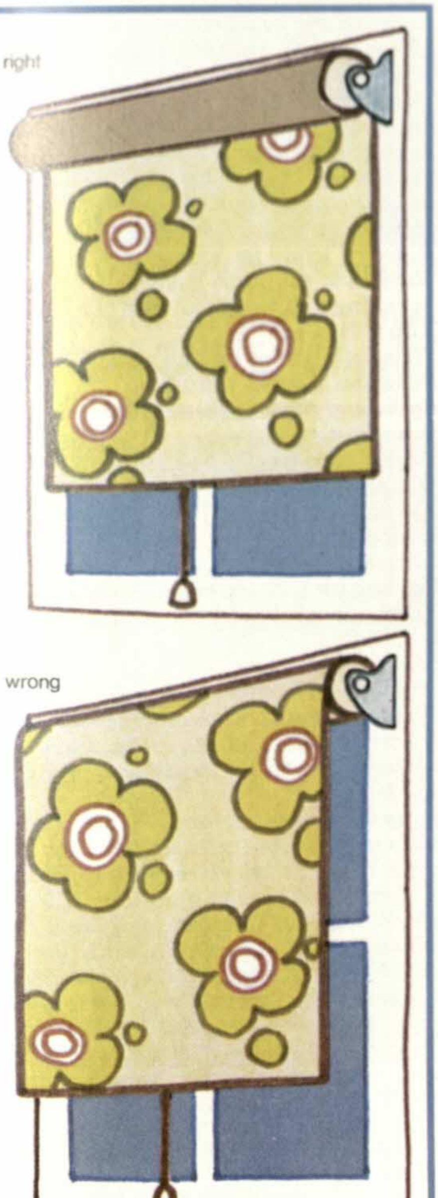
☐ Place the prepared fabric right side up on the floor. Lay the roller across the top with the spring mechanism on the left.

☐ Attach the fabric to the roller with small tacks, working from the centre towards the edges (fig.9).

☐ Roll up the blind by hand and place into the brackets. Pull the blind down and make sure it hangs properly and rolls up smoothly, if not, take it down and roll it up again by hand. Be careful not to overtension the spring because if it snaps up too quickly the mechanism may be damaged. The blind should hang with the fabric next to the window and the roller towards the room (fig.10).

☐ Thread the loose end of the cord into the acorn.

Note: If your window is wider than 2.75m (9') it would be possible and effective to divide the window into two, three or even four and place the blinds side by side. The brackets should then be placed close together on to the window frame.



10. *How to hang the blind.*

This decorative roller blind is placed over a window that would be difficult to curtain in any other way as the curtains would hang away from the sloping wall. The fabric is a bold batik design worked in strong colours.

Spike Powell

Making an 'antique' icon

Icons were first produced during the period of Byzantine art which stretched from about the 11th to the 15th century. At that time their significance was religious rather than artistic; but the craftsmen who produced them were highly trained in the techniques of their day.

The painting of an icon was usually on a wooden panel constructed of two or three smaller pieces joined together by a frame. The whole of this panel was first coated with a kind of plaster called *gesso* before work was commenced in paint.

In recent times icons have become highly valued works of art, especially in western countries where they change hands at very high prices. This is partly because these particular paintings were produced only in countries stretching from Greece to Russia, and also their intrinsic age. It is the last point that probably gives them a particular appeal, wrapping them up in an air of timelessness and magic.

Antiqued icon to make

You can find illustrations of icons in many reference books on art, and by following the method described here produce something which looks very like the real thing. You do not need the drawing skills of a great artist since it is possible to transfer the image by tracing or produce an enlarged image by using a slide projector.

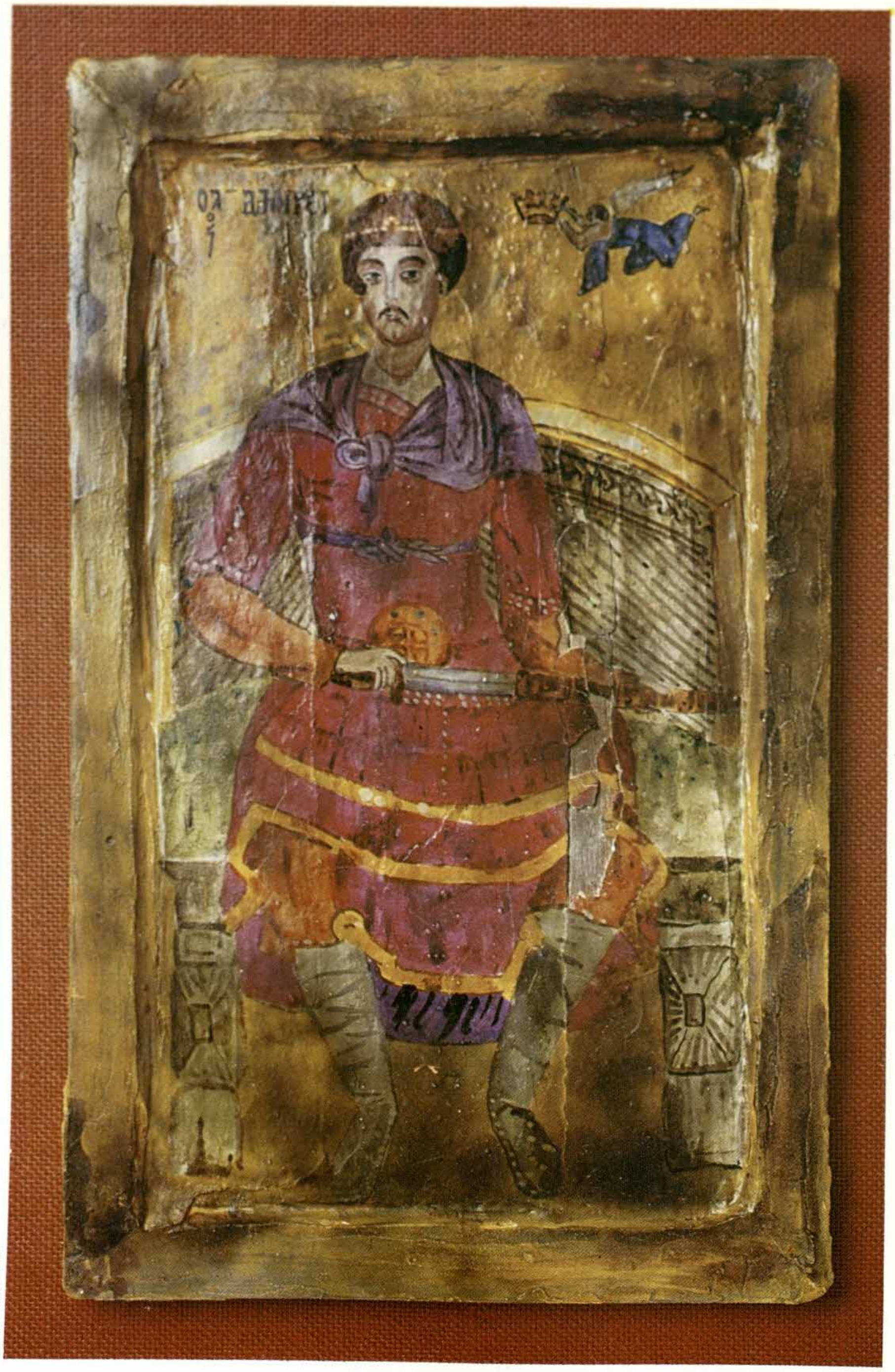
Many museums and galleries have slides of icons for sale and it is also possible of course to have a slide made by taking a picture of an icon in a book.

You will need:

Slide projector or tracing materials.
Selection of artist's brushes.
Spatula or other implement for spreading.
Panel pin punch.
One piece of 6mm (¼") plywood about 23cm x 38cm (9"x 1'3") or size of your choice.
1.2m (4') of 2.5cm (1") wide rounded beading (or to fit chosen plywood).
Small packet of patching plaster such as Polyfilla.
1cm (⅜") panel pins.
Small tin of ordinary wood varnish.
Waterproof inks in colours such as the following: white, black, green, scarlet, ultramarine, yellow, burnt sienna and nut brown.

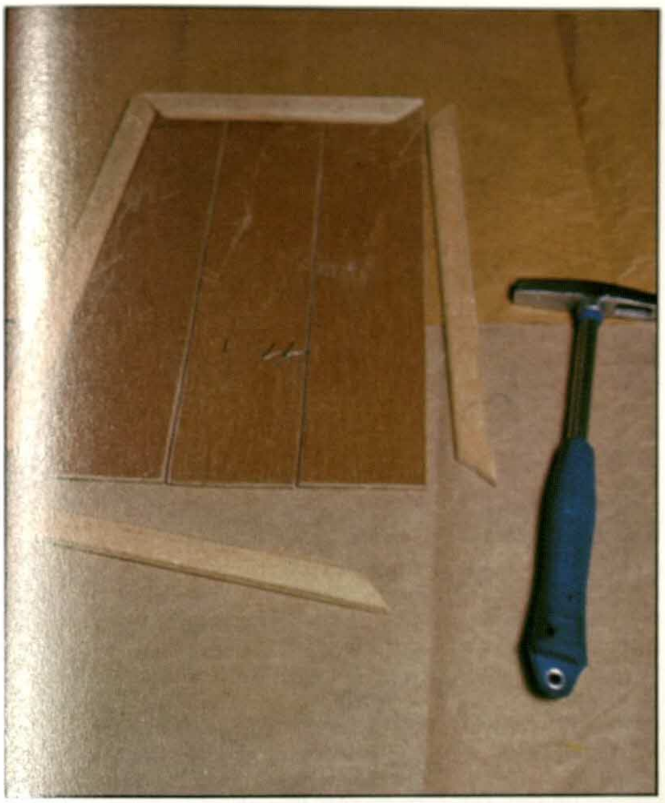
Preparing the surface. Before starting on your icon, it is well to bear in mind that you are attempting to make a painting that has a feeling of age about it. Therefore you will need to take special care from the start to build this feeling of age into the picture. On the wooden panels that were made long ago, time and temperature changes have caused the wood strips to expand and contract, thereby stressing the paint along their lengths.

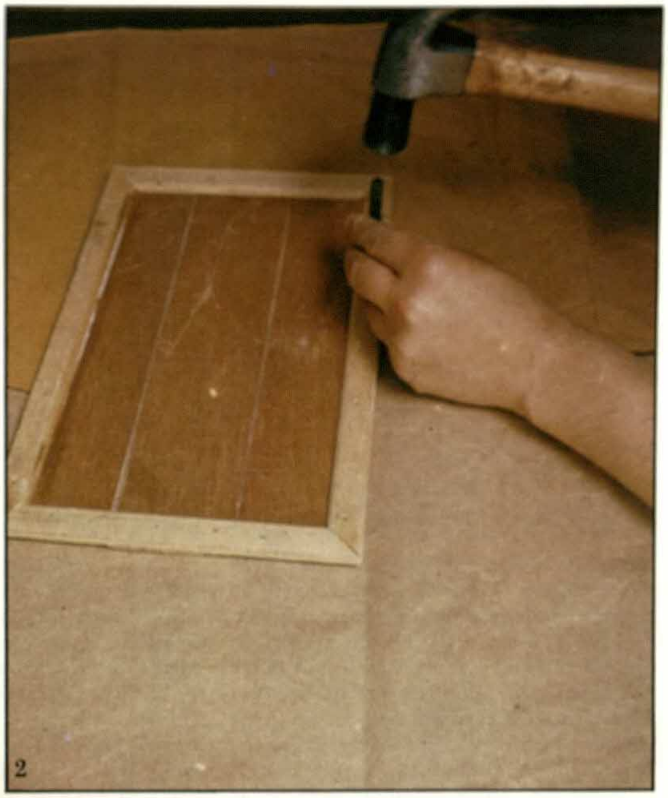
This being a characteristic of icons, you should try to reproduce it accordingly.



Steve Bicknell

This icon shows signs of considerable antiquity. The secrets of its surprising 'past' are revealed in this chapter.





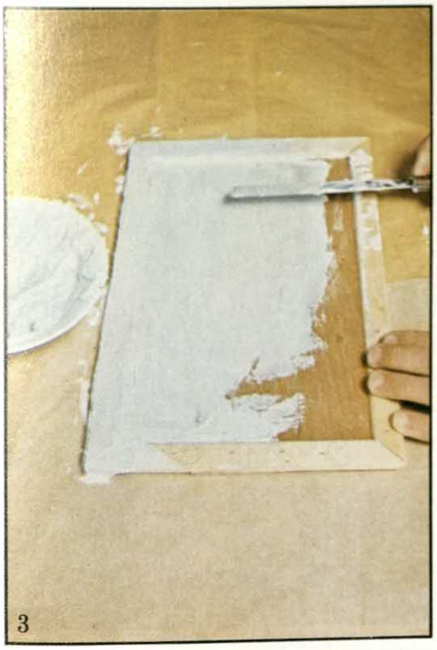
2

☐ Saw your piece of plywood into three strips about 7.5cm (3″) wide.

☐ Cut the beading (or have it cut) into lengths that will make a frame around the three strips when they are laid into a panel (fig.1). Beading can be mitred; but this is not essential.

☐ Nail the beading to the plywood with the panel pins, and use a punch to bury the pins just beneath the beading surface (fig.2).

☐ Having completed this stage mix a quantity of plaster into a creamy paste —the mixture should be the same consistency as icing for a cake.



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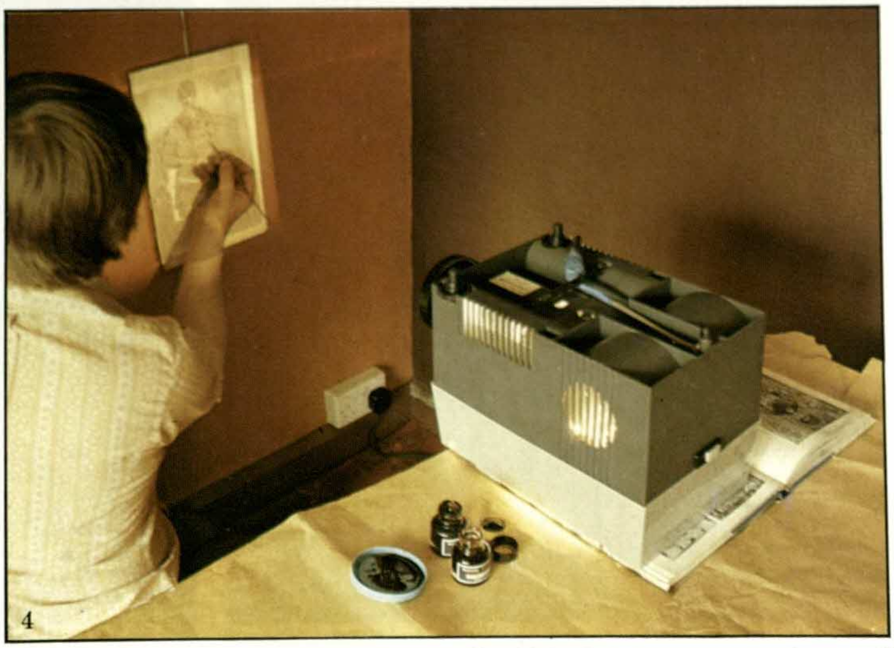

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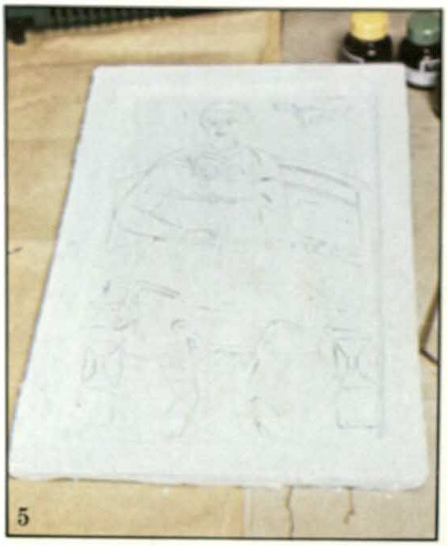
☐ With a kitchen spatula, or similar utensil, spread the plaster evenly over the front of the panel and its beading frame. Do not forget about the edges and avoid a smooth finish—the slight roughness of the surface will further help to 'age' the paint work (fig.3).

☐ Now place the plastered panel in a very hot oven and leave for about fifteen minutes to dry. This will make the plaster crack slightly in the same way that age would crack paint work.

Painting the image. You are now ready to begin tracing out the icon that you have selected from an illustration. If you are using a projector the panel should be hung on a convenient wall space and the projector placed so that the image is not distorted (fig.4). The example shown projected here can be traced from the sketch overleaf either in the size shown or enlarged to its original size of 23cm x 38cm (9″x1′3″).

☐ When you project an image you can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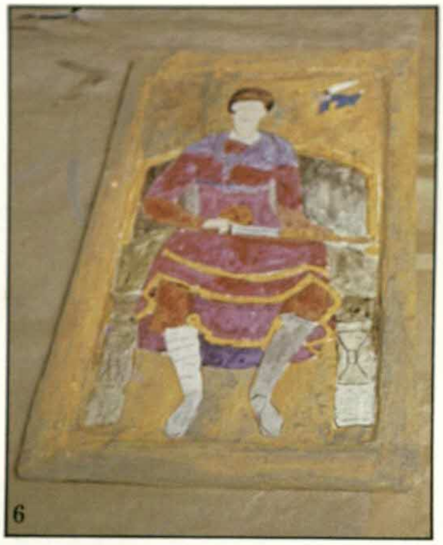
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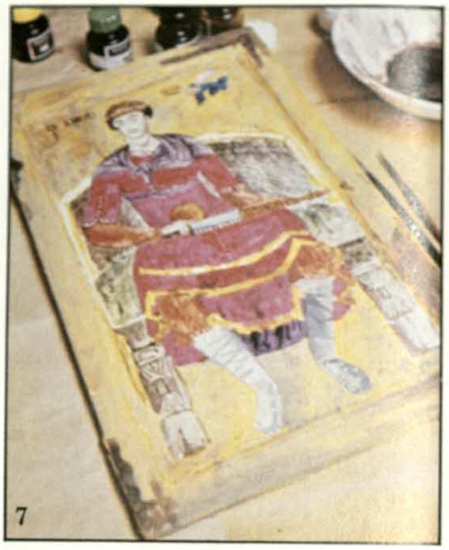

7

paint the outline directly on to the prepared board. When tracing, pencil it lightly before beginning to paint (fig.5).

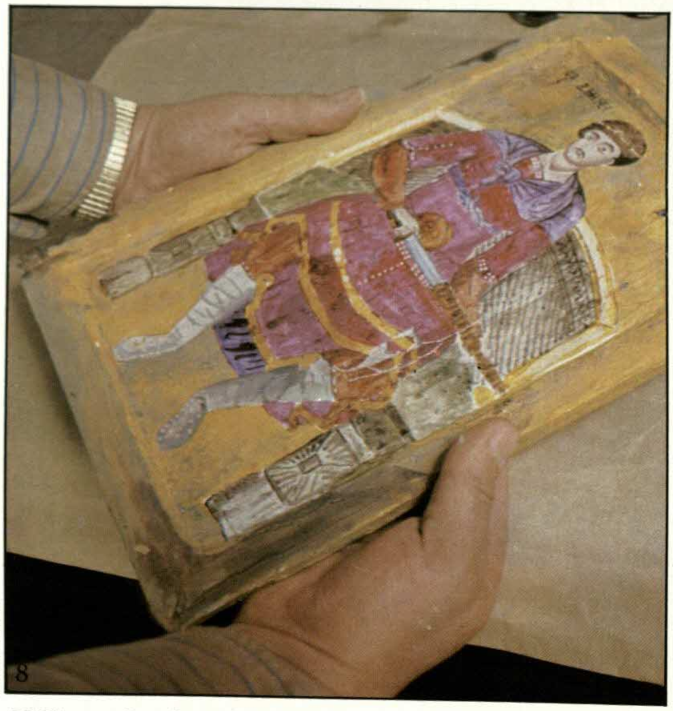
☐ Mix up a little nut brown ink on an old saucer and with a fine brush start to paint in the main lines of the composition. A simple coloured outline is all that is required at this stage, so do not worry about adding too much detail. Always try to remember that if it looks right then you have gone far enough.

☐ Using your drawing inks paint in all the main washes of colour in flat tones. The uneven plaster surface will already begin to give your paint an authentic appearance at this stage (fig.6).

Take extra care with the background colour. Usually yellow ink, or nut brown thinned a little with water, is most effective if followed by a rough wash of grey or light green on top. Do not use bright colours for the background.

Work up all the shading and highlights (fig.7); but remember that icons were painted in a very flat style, so too much realism is not required. Make sure that you also add such items as lettering.

Distressing the surface. When your painting is complete then it is the time to start the final 'ageing' process. To do this you should not be afraid to be a bit ruthless—real icons have been knocked about for centuries.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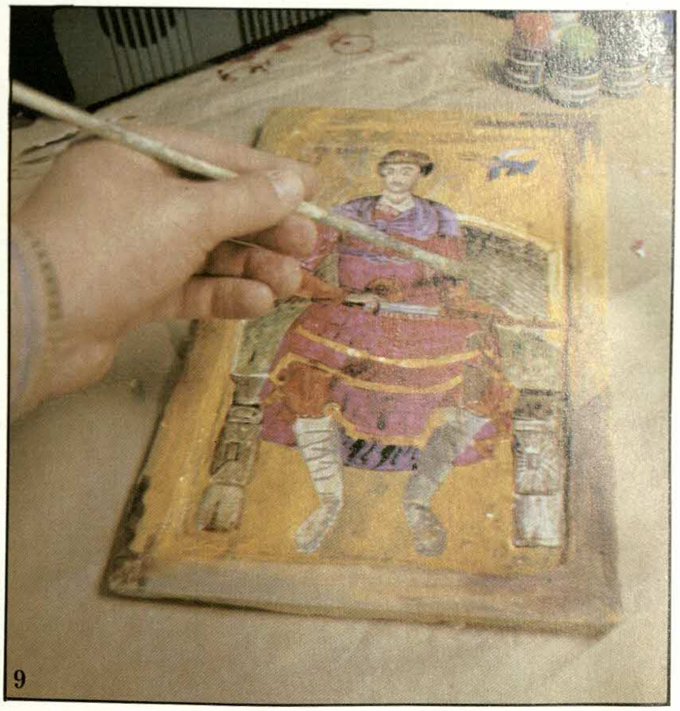

9

Stuart Dalby

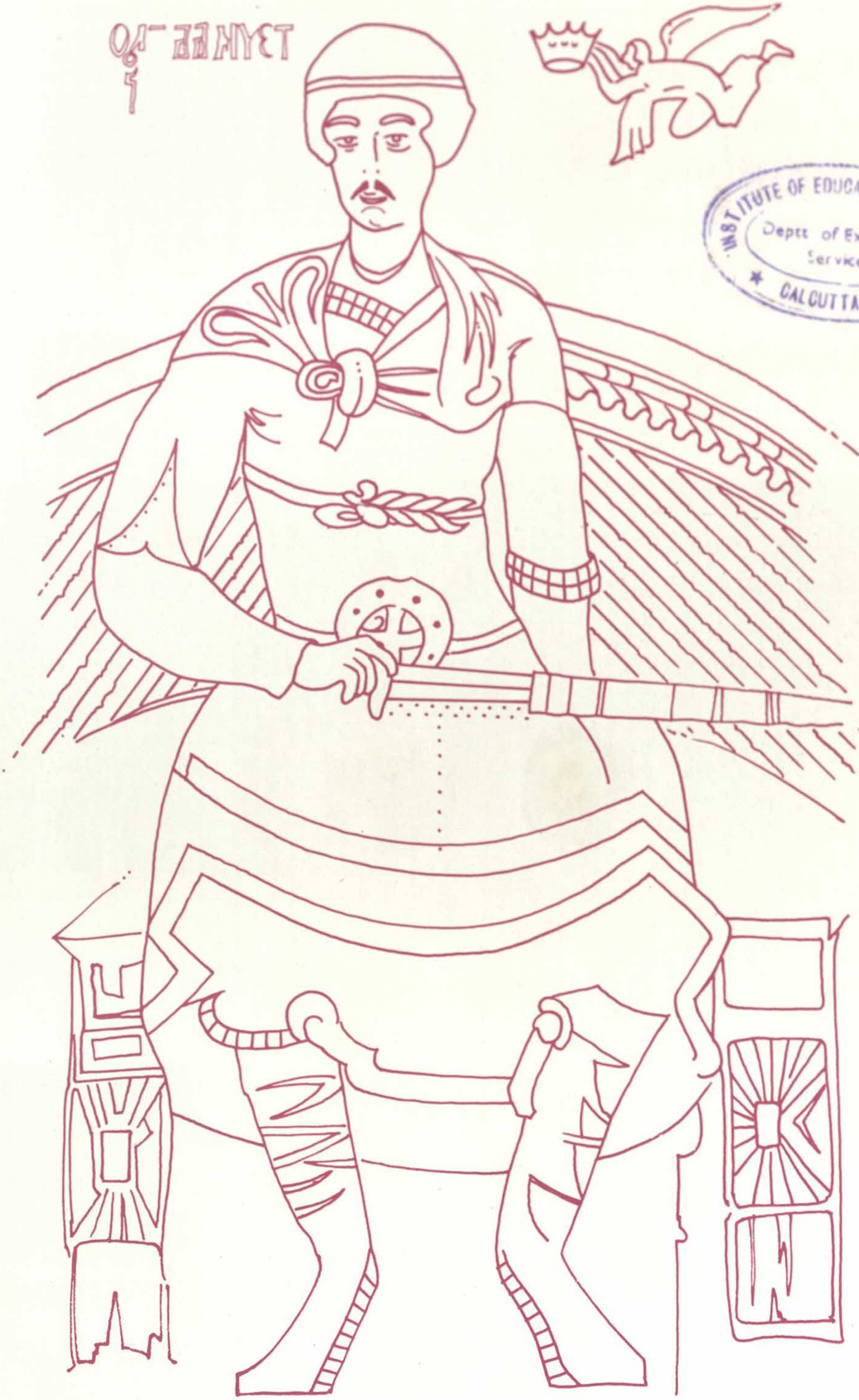
☐ First take the panel between your two hands, holding it at its extreme edges. With your fingers press gently upwards on the underside and along the joins in the three wood strips (fig.8). The surface of the paint work should then crack along these lines; but do not allow too many large pieces of plaster to fall away.

☐ Lay the icon back on the table and replace one or two loose pieces of paint work roughly in their original positions.

☐ Now carefully varnish the surface, allowing the varnish to stick loose pieces into place (fig.9), and leave to dry.

☐ The picture should now be blackened a little by holding it over the tip of a flame. Your icon is now finished and is ready to be hung.

The sketch on the right can be reproduced to size or enlarged and then transferred on to plastered panelling for painting. The naive quality lends itself to simple, untrained skills.



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CALCUTTA-27

Trevor Lawrence

Cutting and sticking polystyrene

Polystyrene sheets and tiles are easy to work with, readily available from wallpaper and hardware shops and inexpensive to buy.

The sheets or tiles are easily cut to make any shapes you wish. The shapes can be used for theatrical props, for Christmas decorations and other festivities, for mobiles or to hang on a wall. In this chapter polystyrene is cut up and stuck together to create a sun, a letter R and a relief map.

A sun

You will need:

Two square sheets of polystyrene any size you wish for sun and any depth up to about 1.25cm ($\frac{1}{2}$″).
Tracing paper or greaseproof paper the same size as the polystyrene.
Spare piece of tracing paper.
Masking tape or other adhesive tape.
Sharp knife (or scissors for children).
Metal or plastic ruler, protractor.
Pencil, felt-tipped pen, pair of compasses, plate, saucer or glass.
PVA adhesive such as Evo-Stik.

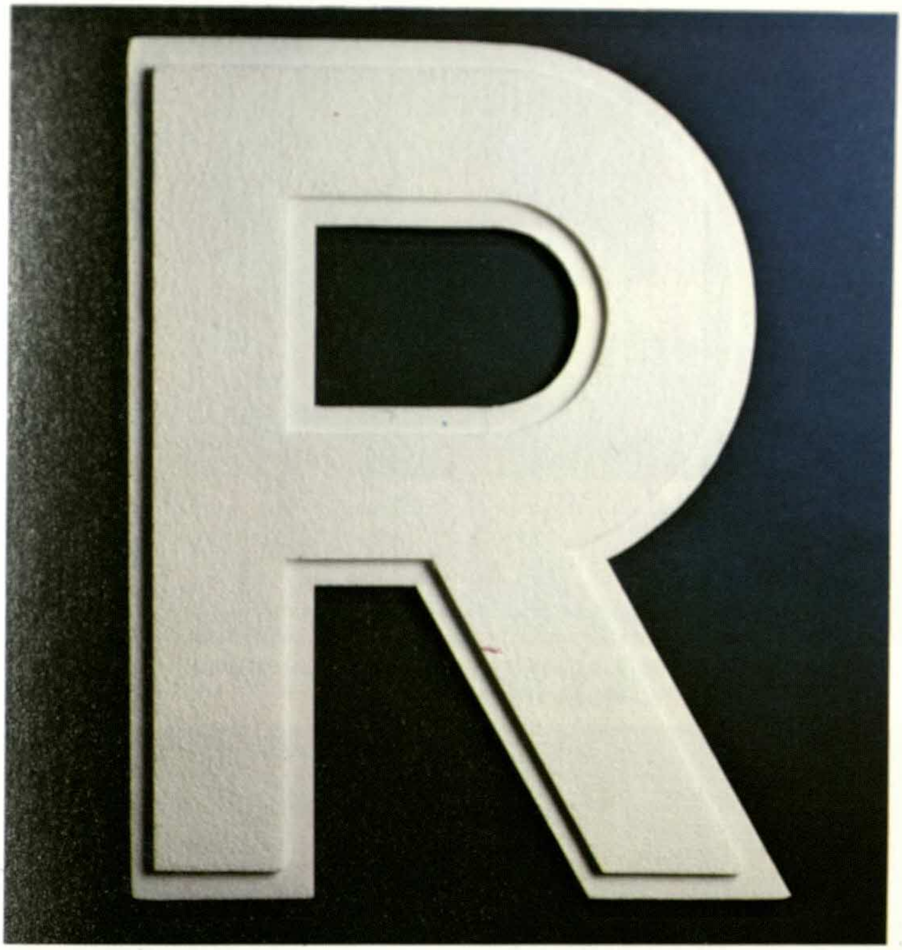
☐ Using the compasses or a plate draw a circle on the tracing paper.

☐ Mark off radii at 30° intervals along the perimeter (fig.1).

On the spare piece of tracing paper experiment with the 'rays' of the sun by drawing round part of the edge of a saucer or glass for the top rounded part of the ray then move the saucer and draw again for the underside of the ray (fig.2). The base of the ray must be the same width as the 30° intervals

A polystyrene sun which has been painted with orange and yellow water-based paints. Designed by Glen Travis.

David Levin



Two cut-out shapes of polystyrene stuck together to create a relief.

Alan Duns

marked on the perimeter of circle. When you have made a satisfactory shape, cut round it and place it in position between two radii, then tape down and draw round. Repeat all the way round the circle (fig.3); this makes the pattern.

☐ Tape the tracing paper tightly over the polystyrene sheet.

☐ Using the ruler to keep the knife steady cut through the paper and the polystyrene at the same time. Stick the paper down with small tabs of tape as you go. Cut steadily and carefully; the knife may otherwise go off at a tangent.

☐ To make the centre disc draw a circle on to the tracing paper with radius equal to three quarters of the radius used for the first circle.

☐ Tape tracing paper over polystyrene sheet and cut out polystyrene disc.

☐ Position disc in centre of sun and glue on with a few specks of adhesive.

A letter

An alphabet letter can be cut from polystyrene using the same techniques as for the sun.

You will need:

Tools and materials are the same as for the sun.

☐ Start with the letter R shown here or any other letter of your choice. Choose a simply shaped letter to begin with. Do not start making complicated letters until you have had a little practice. Practise on a scrap piece of paper before transferring to tracing paper.

☐ Draw the rounded inner curve of the R first. To do this take a glass or saucer of suitable size and draw half way round it to make a semi-circle. Extend arms of curve in two straight lines.

☐ Draw the outer side of the curve, making it an equal distance away from the inner curve. Draw in dots first, then connect to make a smooth curve. Look at the photograph to judge how far to extend the lines.

☐ Draw the straight upright lines.

☐ Tape the tracing paper over the polystyrene and cut, or make a template. If you wish to make a slightly smaller letter make a template first from the original letter then cut the tracing paper R down by a small amount all round. Use that to cut out a smaller letter.

If you want to make a slightly larger letter tape the tracing paper R to more tracing paper and draw another letter slightly larger than the first, using the original letter as a guide. Then cut out the polystyrene.

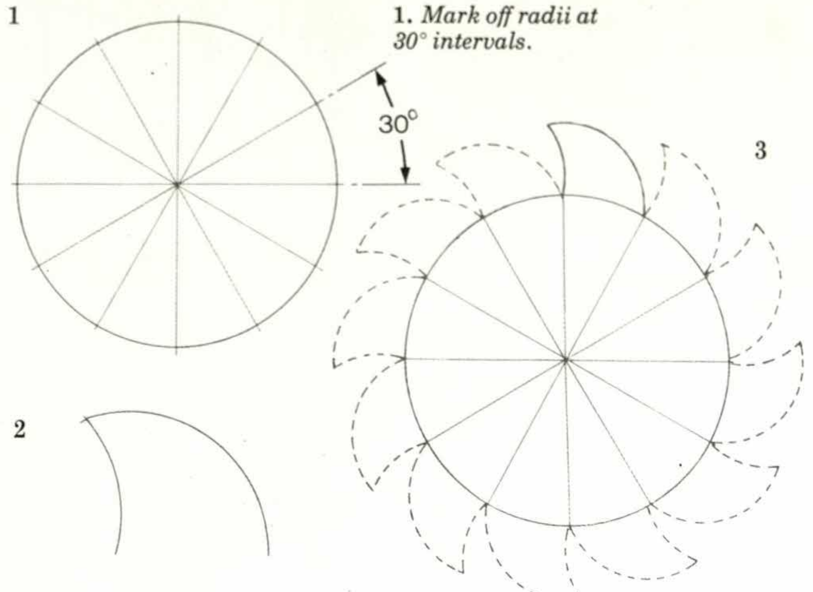
The two sizes of letter can be stuck together using a PVA adhesive such as Evo-Stik.

Finishing

Any rough edges should be smoothed with a fine grade glass paper.

You can leave the polystyrene as it is but it will last longer if you apply one or more decorative finishes.

Carefully following instructions in Plastics chapter 17, page 1364, finish off the polystyrene with a decorative coat of paint, dye, varnish or ink which will look attractive and also help to preserve it.



1. *Mark off radii at 30° intervals.*

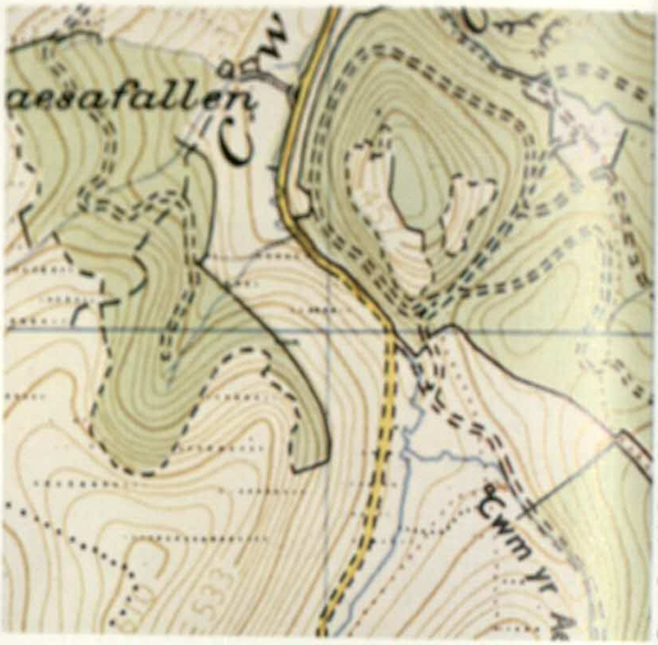
2. *One ray made by joining two arcs of a circle.*

3. *Rays drawn on to circle.*

Paul Williams

Barnaby's

Photograph of the area near lake Bala in Wales which the polystyrene contour map represents.



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Section of Ordinance Survey map of the lake Bala area used as reference for the contour map.

A contour map

Polystyrene tiles can be cut and stuck together to make a contour map. What better way could there be of representing the area in which you live, or a part of the countryside you like? Older children, under supervision, will enjoy a project which shows their town or village in its surroundings.

You will need:

Contour map of the area such as an Ordinance survey map about 2cm to a kilometre (1" to a mile) in scale.

White board or stiff card 61cm x 61cm (2'x 2').

Polystyrene tiles about 6mm (¼") thick and 61cm (2') square. Buy 10-12 tiles; the exact number of tiles needed will depend on the height of the land and how many contour lines you choose to show. The contour map illustrated here uses 11 tiles.

11 sheets of tracing paper or greaseproof paper the same size as the board.

Scrap of tracing paper.

Masking tape or transparent adhesive tape.

PVA adhesive such as Evo-Stik.

Sharp knife (or scissors for children).

Metal or plastic ruler, preferably 61cm (2') long although a smaller ruler will be adequate.

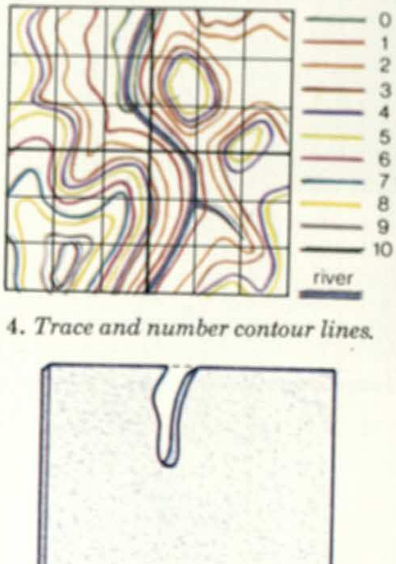
Pencil and felt-tipped pen.

☐ Locate your area on the map. Choose an area not more than 4 km square (2 miles square).

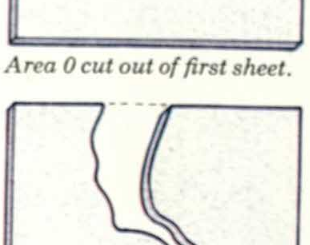
☐ Draw the square on a scrap piece of tracing paper.

☐ Mark off along the edges of the square at 6mm (¼") intervals, and lightly connect the marks to make a grid.

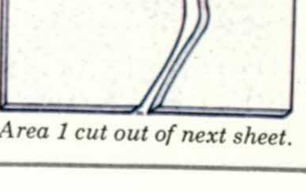
☐ Place the square over your chosen area on the map and firmly tape down.



4. *Trace and number contour lines.*



5. *Area 0 cut out of first sheet.*



6. *Area 1 cut out of next sheet.*

Paul Williams

☐ Trace in the major contours first, then draw the intermediate contours. Mark each contour in a different colour for identification (fig.4).

☐ Number the different contours starting at 0 for the lowest contour. This will later help you to construct the model.

☐ To enlarge the map mark a 61cm x 61cm (2' x 2') board or card into the same number of squares as the traced map.

☐ Then, working section by section, transfer the contour lines on the traced map to the board (see Design know-how chapter 4, page 112). Mark in the contour numbers.

☐ Make a separate tracing of each contour line on a different sheet of tracing paper and number each tracing with the number of the contour line.

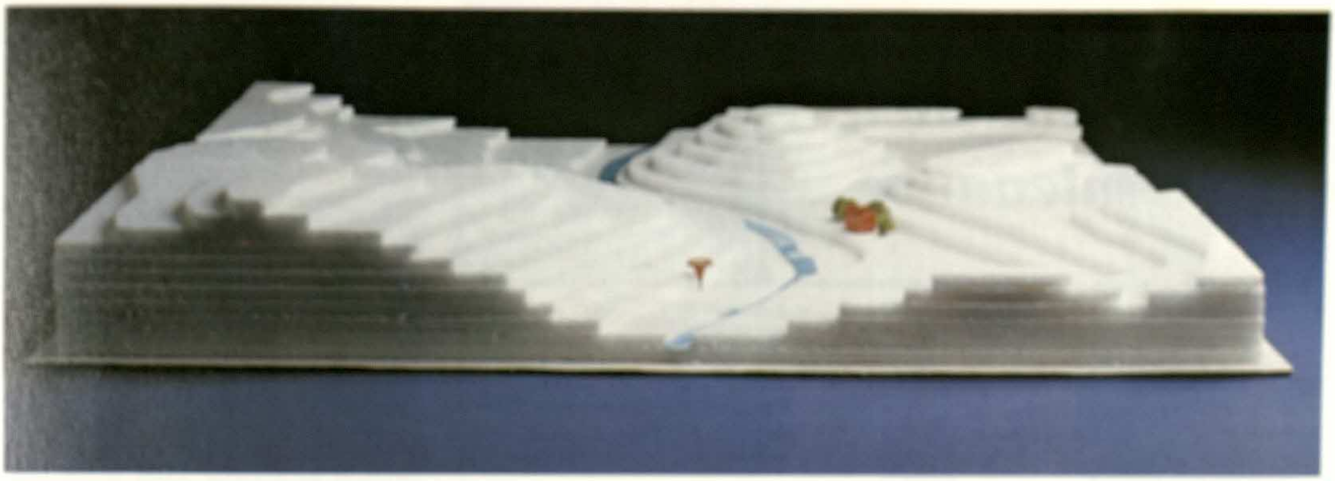
Cutting. Place tracing of contour 0 over a polystyrene tile and tape down, making sure the edges are lined up. Cut along contour line. Cut through the tracing paper and the polystyrene at the same time using a scalpel knife or trimming knife. You have now cut out area 0 and are left with areas 1 to 10 still to cut (fig.5).

☐ Place the next piece of tracing paper over another tile and tape down.

☐ Cut along the contour line marked 1 in the same way as before. You have now cut out area 1 and are left with area 2 (fig.6). Mark the back of the tile with the appropriate number.

☐ Repeat this process and cut out each

Right: finished model with drawing pin marking the point from which the photograph, above left, was taken.

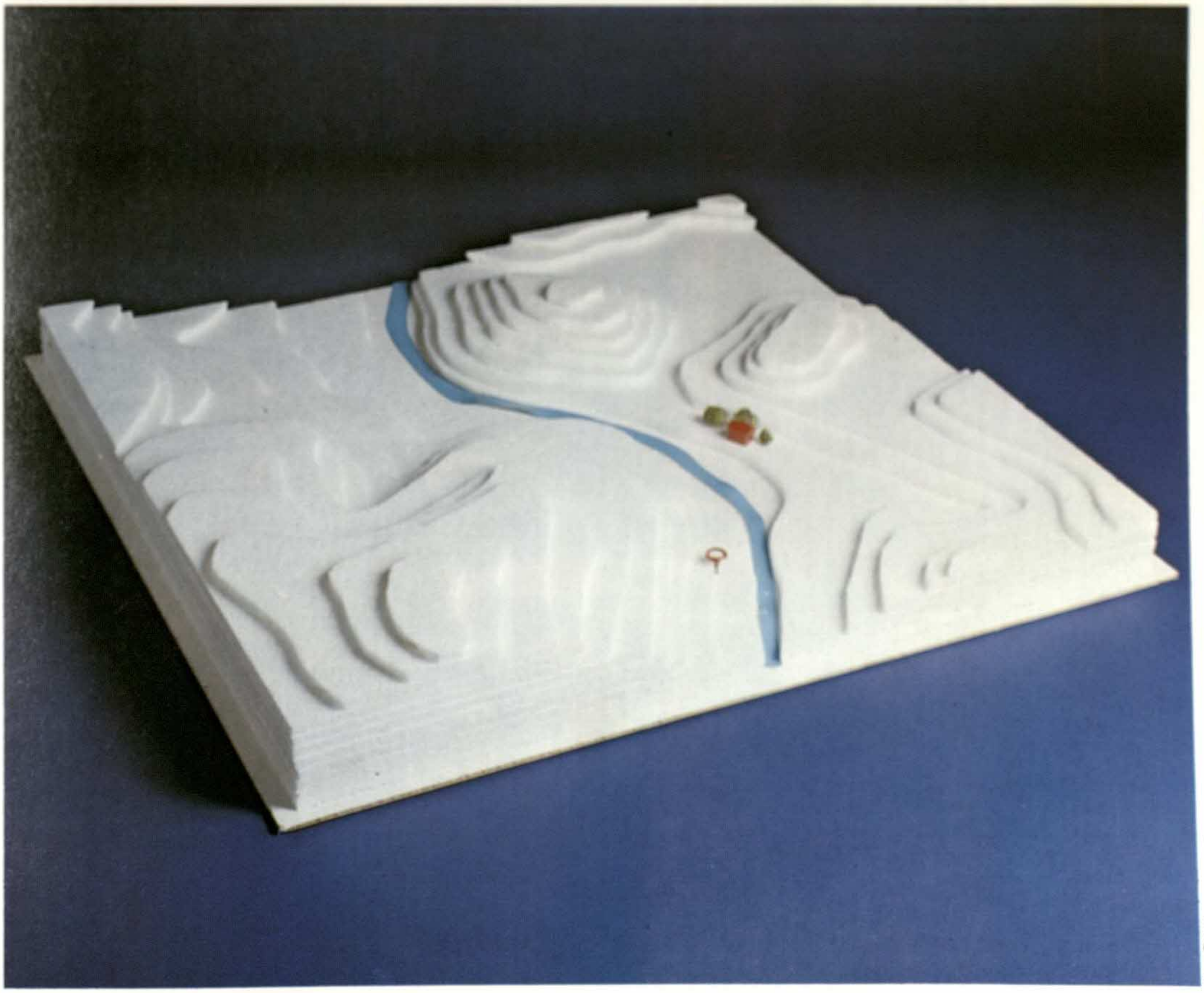


contour from a fresh polystyrene tile, numbering the back as you go along.

Stick together all the cut-out pieces with PVA adhesive. Look at the map as a guide and start from the highest number down, ie 10 is glued to 9, 9 to 8 and so on until you reach 0. Finally, glue the last tile to the board or card. Only spots of adhesive are needed for gluing.

Finishing. Either leave the model as it is or use water-based paints to make it look as realistic as possible. The materials and techniques for this are described in Plastics chapter 17, page 1364. As a final touch add tiny buildings (bought from a toy shop or make your own from card), trees, roads and any other details of the landscape which can be shown.

A side view of the model showing how the eleven layers of polystyrene are built up to make the contour map.



Alan Duns

Tools and their maintenance

Wood — carpentry 17

The simplest way of dealing with the problem of tool maintenance is to make sure that you keep the need for it to the minimum. This can be achieved in various ways. Store tools properly, use them for their intended purpose and do not drop them nor knock them about. Even with the most careful and knowledgeable treatment, most kinds of tools need a little attention from time to time to keep them at their best. Apart from abuse, there are two other chief enemies.

Rust. Good storage conditions are essential to keep rust at bay. Even in a 'dry' place, condensation can occur when it is cold unless the tools are in close proximity to rust-inhibiting paper or coated with oil or lacquer. Linseed oil is suitable for coating tools (not as a lubricant). Apply it with a wad of cottonwool.

If rust has appeared on a tool, steel wool and fine oil will take it off without much trouble. Rust that is too heavy or thick for this treatment may well have ruined the tool.

Wear. Most good tools should last a

Alan Duns

lifetime, and many improve with age. What wears out many tools is not hard work but sheer lack of lubrication. Tools do not need much oil—quite the contrary—but they do need the right kind and in the right places.

Lubricants

Little and often is a good rule. If a tool is used every day or once a week, its working parts could do with a drop or two; once a month is a good idea anyway, whether the tool is used or not, because the fine oil used contains a high proportion of paraffin and tends to dry out to some extent.

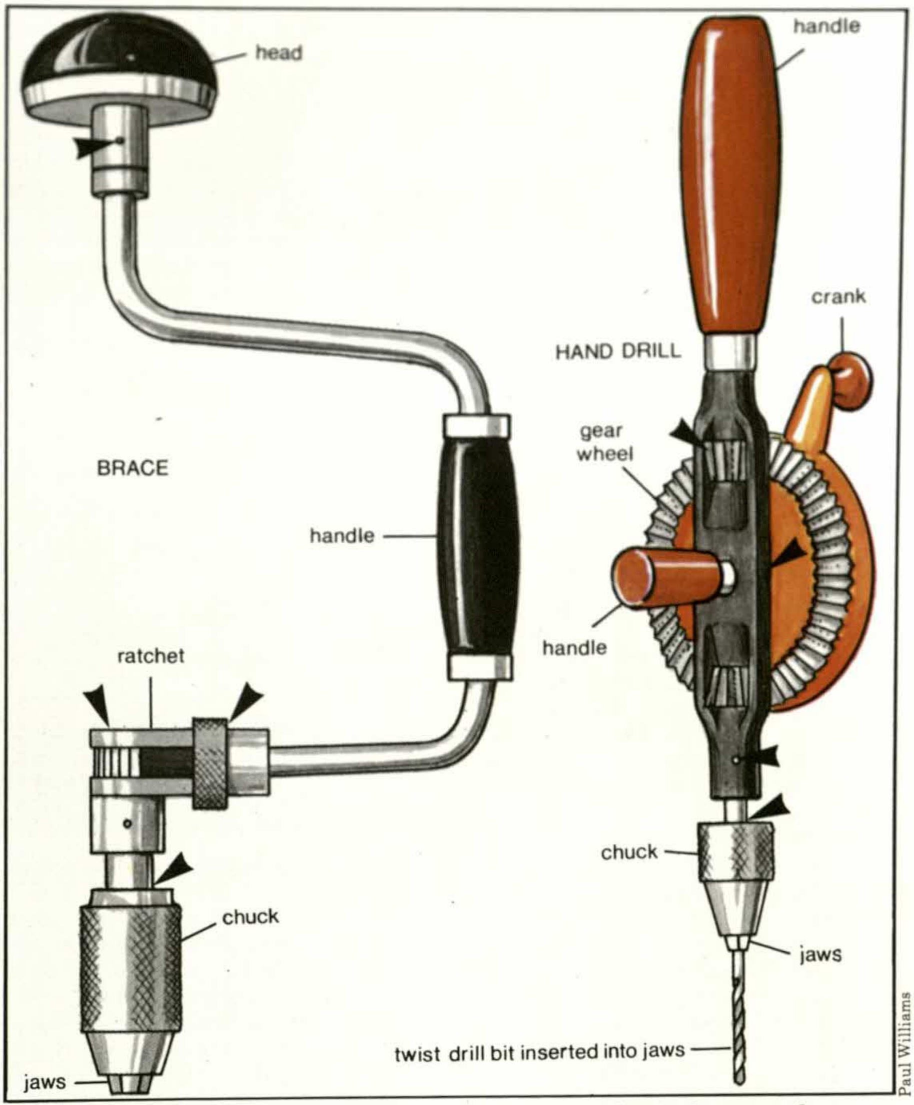
To obtain a suitable oil for your tools read the label of contents on the can and avoid those containing molybdenum or graphite and if in doubt ask your hardware dealer for advice. A good all-purpose oil, such as 3-in-One, is useful and also suitable for a sewing machine.

Super-duty lubricants. The idea of using a super-duty lubricant at infrequent intervals is very tempting, and can work out very well in some instances, but there are certain limitations. Oils and greases containing extreme pressure (EP) lubricants like molybdenum disulphide or graphite should be avoided because their molecules do not break down easily under pressures lighter than those that they are designed for (such as a car engine). Pressures such as these are never encountered in hand tool applications. This means that their super-tough particles remain as a fine abrasive which can create rapid wear.

Grease. All greases have one disadvantage—they tend to pick up dust and grit—so they are best confined to enclosed situations such as a hand drill with enclosed gear casing, where they cannot do this. If you must use grease choose a general-purpose, light silicone one.

Hand drills and braces themselves need only light oiling in the moving parts including the brace head mountings and chuck threads (fig.1). There is no need to dismantle the tool, a drop of oil will work its way into the tool.

Power tools should have their lead cable and motor professionally examined after every fifty hours of use. This may mean having the tool serviced every six months or (as is more likely) every two years, according to the amount of use it gets. A power tool should not be allowed to work indefinitely just because it is going well. Do not oil or grease a power tool; if you do and it's not in the right places it can do more harm than good. If a power tool is serviced at regular intervals there is no need for further lubricating.



Paul Williams

1. *Arrows indicate the parts that must be lubricated. Use a general household oil and avoid super-duty lubricants.*

There is very little chance of good work being done in this workshop.

A tape rule should not need lubrication unless it has become accidentally wet, in which event the rule should be fully extended and wiped dry. Return rule to case then extend again and wipe with a lightly oiled rag as the rule slips back. This may help to prolong its life if the water has got into the inside works.

Benches and clamps

Your work bench is a tool, a gripping device and a reference for edge and surface flatness. If a bench is used with care, the occasional going over with a finely set plane should be all it needs apart from oiling or lacquering.

A very rough or uneven top may be better covered with a new, thick section board: chipboard is especially suitable, being very flat and relatively inexpensive.

If a vice jams or rocks about it can be more of a hindrance than a help to you. So tighten structural bolts or screws from time to time. Partially dismount the vice to clean and oil it.

Replace wooden jaw linings before they are so damaged as to mark your timber. Use a hardwood such as beech to replace the wooden linings. Cut the lining to the size of the one being removed and screw or bolt it back.

G-clamps. A little oil on the thread and in the small ball-joint at the screw-end foot should be all that a G-clamp needs. G-clamps are made from malleable iron, so if you have dropped one and knocked it out of line it is possible to hammer it carefully back straight.

Striking tools

Apart from screwdrivers, hammers and mallets are subject to the worst abuse.

Hammers need frequent checking to ensure the fit of handle to head, not because they are shoddily made (assuming you have bought a reputable brand—which is always advisable) but because of the way they are used.

Once a head is loose, do not be tempted

into dunking the tool in a bucket of water. This only swells the fibres in the confined space of the hammer eye and destroys their strength. Have the handle replaced or, if the head is worn as well, replace the hammer with a new one before it does someone harm. Keep an eye on the striking face. Any signs of cracks or chipping anywhere on the head indicate that it is time to get a replacement. A chip flying from a faulty hammer face can reach the velocity of a bullet and do a great deal of damage. Keep the striking surfaces clean by rubbing them with abrasive paper, so that any damage is always apparent. Cracks in wooden handles should have equal attention.

Mallets are made from hardwood, usually beech, so they appreciate an occasional drop of linseed oil to stop them drying out. The only other attention they are likely to need is re-facing, with a sharp plane finely set, but with correct use (on materials softer than their own wood) this should rarely be necessary. Looseness of heads is cured simply by tapping the tool upside down on a firm surface, as the head is self-wedging on to the handle.

Brushes

Brushes are often neglected. They rarely get attention until so clogged up that major doses of paint stripper are needed to clean them—and then it is often too late. Ideally, to keep them in good condition, you should clean them in the appropriate solvent immediately after use, and then wash them in warm water and detergent. Dry the brushes then shape into form and store in a plastic bag, which can be secured round the handle with a rubber band.

Another method is to suspend them constantly in a tin of brush cleaner, filled up to the top of the bristles. There are proprietary cleaners available that evaporate slowly so an eye must be kept on the level which drops slowly. This is suitable for brushes which are used regularly. If you are not going to use the brushes again for quite a while wash and dry them before putting them away. After the bristles have been wrapped in a plastic bag, suspend them from their handles or lay them flat. If you rest them on their bristles, the brushes will lose their shape giving you a bad start on your next job.

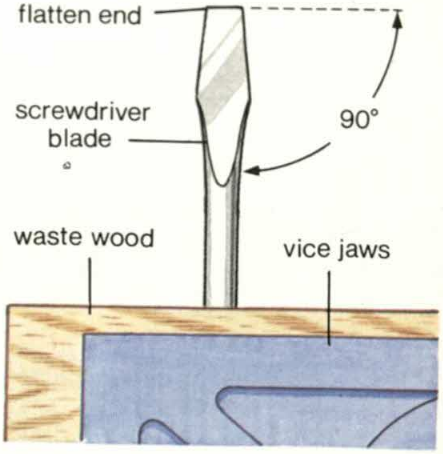
Screwdriving tools

The two main types are hand screwdrivers and spiral-ratchet screwdrivers. Each type includes screwdrivers of various sizes to cope with the appropriate screws.

As far as possible, try to match the screwdriver tip to the screw slot to prevent damage to either of them.

Hand screwdrivers should have their tips filed true when there is any sign of rounding or damage. Small screwdrivers used on large screws are easily damaged. A screwdriver is meant to fit snugly into screw slots. Ideally, they should be fat enough not to go quite down to the bottom of the screw slot.

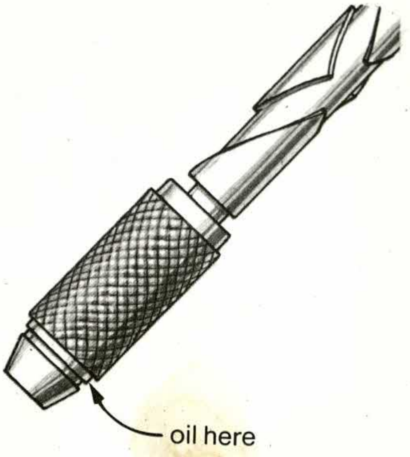
To reface a screwdriver clamp it in a vice (use bits of waste wood to protect wooden jaw linings if necessary). Use a flat metal-work file and file the front end flat and square (fig.2). Then trim each of the four sides in turn.



2. *Tip of screwdriver must be straight.*

If you must use a screwdriver as a chisel or a crowbar, keep an old one specially for the job, and you will have far less filing to do on good ones.

Spiral ratchets need only the occasional drop or two of oil in the chuck sleeve (fig.3). Pull the chuck sleeve as if inserting a bit, and drop the oil in the small space at the front. The oil will work its way gradually back to the ratchet mechanism. Large doses of oil (or worse still, grease) on the grooved driving stem will tend to carry grit back into the 'works' and wear them out prematurely. Better no oil at all with these tools than an overdose.



Paul Williams

3. *Spiral ratchet is oiled in front.*

Tool box

Hammers

The right tool for the job makes all the difference. To most people a hammer is simply a tool to drive a nail home. However, different hammers vary in their function and each type is available in various weights. Some of the more common hammers illustrated have a specific function.

Claw hammer, 200gm-850gm (7oz-30oz), is used for general purpose carpentry, particularly for driving and removing nails. When removing nails make sure that the nail is well into the claw, then lever evenly.

Warrington or cross pein hammer, 170gm-450gm (6oz-16oz), is used for general nailing, joinery, and planishing or metal beating.

Ball pein or engineer's hammer, 110gm-1360gm (4oz-3lb), is used for metal working. The round end is for starting rivets; its face is hardened steel and will not chip.

Pin or telephone hammer, 100gm-110gm (3½oz-4oz), is used for tacks, panel pins and fine nailing. The wedge shaped end is used for starting small nails while holding them between the fingers.

Mallets

There are two basic types of mallet.

Carpentry mallet, used in carpentry and cabinet making.

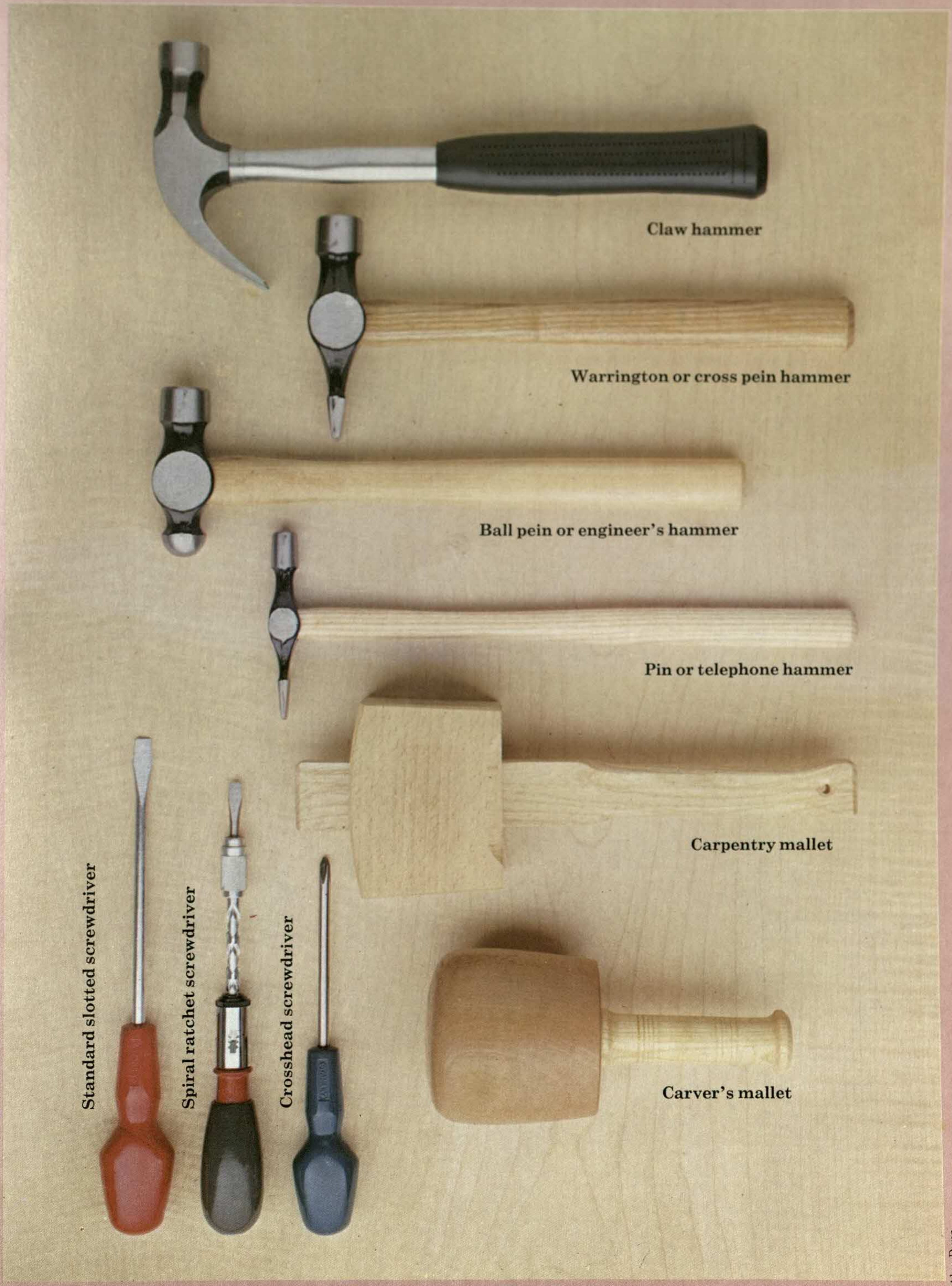
Carver's mallet, used for creative woodwork.

Screwdrivers

Standard slotted screwdriver is used for general driving of single slotted screws.

Spiral ratchet screwdriver is used for general purpose screwdriving. By pushing in the handle it automatically drives or removes screws. When locked the ratchet allows screw to be driven or removed without taking the tip from the screw slot. Bits of different sizes can be fitted into the chuck, making this a very versatile tool.

Crosshead screwdriver, also known as Phillips, is used with cross slotted screws to provide greater grip between the tip and the screw head.


Claw hammer
Warrington or cross pein hammer
Ball pein or engineer's hammer
Pin or telephone hammer
Carpentry mallet
Standard slotted screwdriver
Spiral ratchet screwdriver
Crosshead screwdriver
Carver's mallet

Alan Duns

Twist handle and borders

This chapter continues with rush work. The instructions include making a bowl which is partly chain paired and finished with a 2-rod border. Prepare the rushes before starting work as previously described.

The flower basket

The basket is a flat round mat with a handle. Make the round mat exactly as before (see Basketry chapter 12, page 1416), using the same materials. You will need two additional thick rushes for the handle.

Before the mat dries out, bend up opposite edges and tie in position.

Handle—cut the two rushes about 1m (40″) long.

☐ Push both of them together through one of the raised sides of the basket under the third row of pairing. Use the threader to help you. Pull the rushes through until you have four equal lengths and bend them up to meet each other.

☐ Take hold of a thick end and a thin end in each hand. (This will help to keep the twist even all the way across.) Try to anchor the basket somehow or get somebody to hold it for you.

☐ Now twist the two rushes in the right hand twice, then pass them over the left hand rushes. Change your hands over on the rushes.

☐ Repeat the twist and change-over until you have a sufficient length of handle.

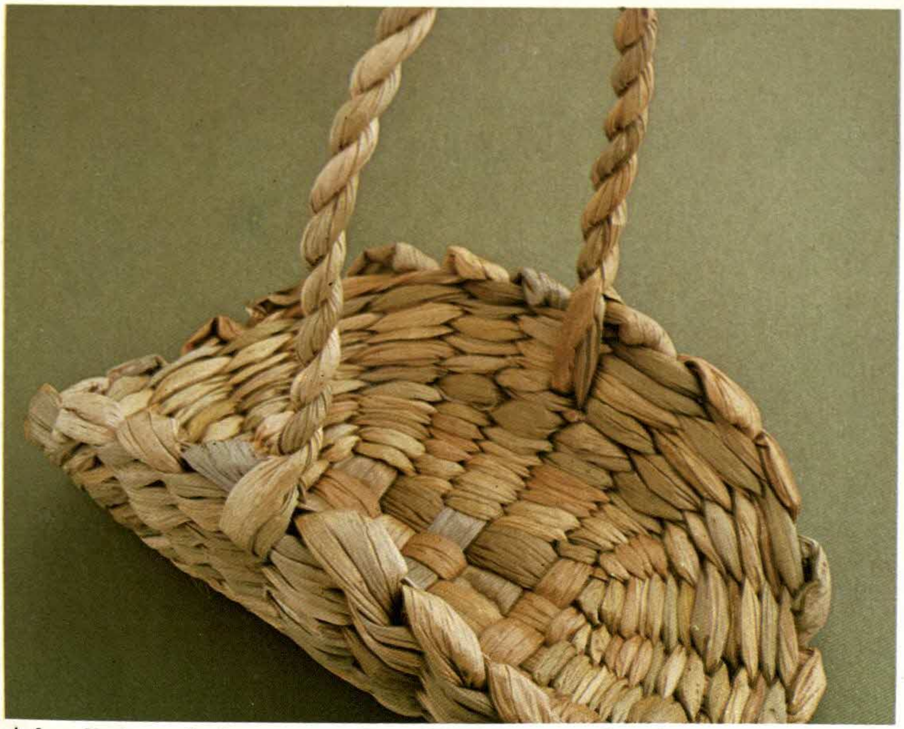
This method of making a twisted handle makes it firm and places the twists in the right places. If you just twist the rushes round together in one hand they will be loose and uneven.

Finish the handle by pushing one end from each twist into the weaving at the third round of pairing. Do this from the inside.

☐ Push the remaining two ends in the same place but from the outside to the inside. You should have two ends on the inside and two ends on the outside of the basket exactly opposite the starting point of the handle.

☐ Weave all the ends in and out of the pairing once or twice.

☐ Keep the basket tied into shape until it is completely dry.



Alan Duns

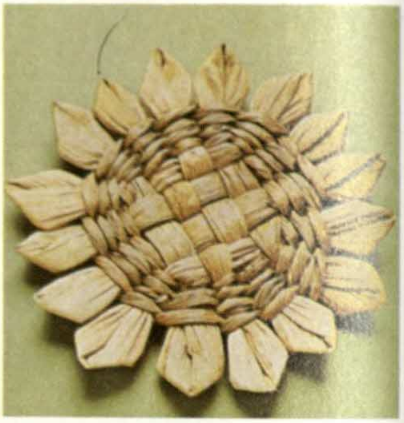
A handle is made from two rushes which are twisted and woven into the mat.

Alternative border

The border illustrated on the mat can be used to vary designs. See Basketry chapter 12, page 1417 for borders 1, 2 and 3.

Border No.4

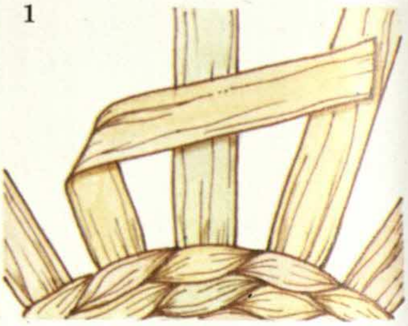
This border is similar to border no.3 but each of the stakes must be turned twice before being paired.



Alan Duns

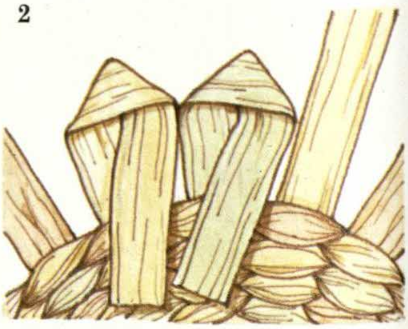
The first turn must be at the level you want the border to be. Turn the stake at right angles to itself and place it so that it is lying crossways—it does not matter which way you turn it (fig.1). Make the second turn so that the end is lying over the pairing and the two turns have formed a neat point (fig.2). Pair each one in as you go.

1

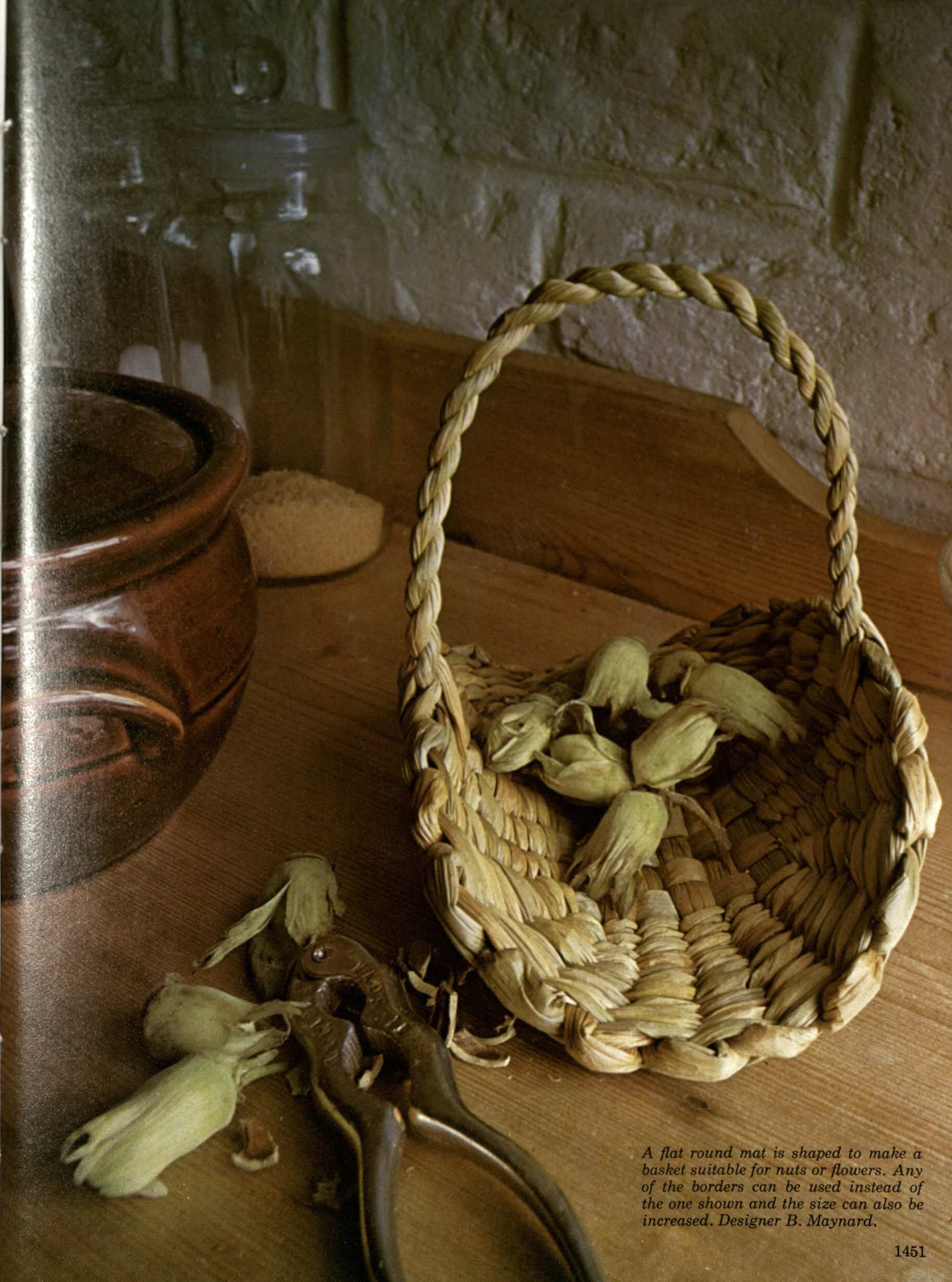


Paul Williams

2

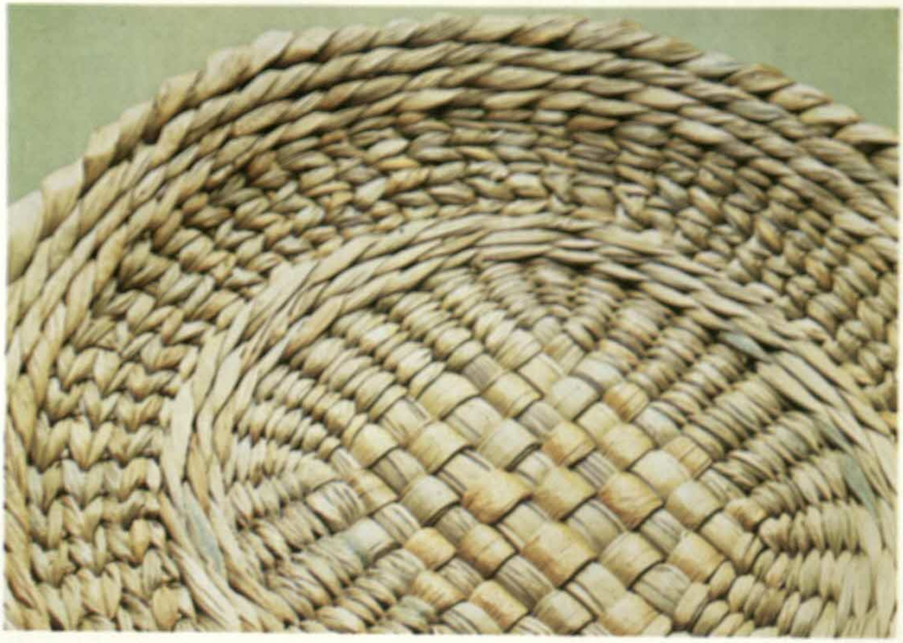


This border is reversible as all the borders are but the appearance is quite different on each side. Either side may be used as the right side.



Geoffrey Frost

A flat round mat is shaped to make a basket suitable for nuts or flowers. Any of the borders can be used instead of the one shown and the size can also be increased. Designer B. Maynard.



Alan Duns

Detail of bowl showing chain pairing between the two sections of waling.

The large bowl

The bowl has a diameter of 36cm (14″) and is suitable for fruit etc.

You will need:

32 thick rushes, 66cm (26″) long.
40-45 weaving rushes.

☐ Start as before for the round mat with the check weave but this time use all the stakes double, ie use two rushes to form one stake.

☐ Put on 4cm (1½″) of pairing still keeping the stakes double.

Waling is done in the same way as for cane work but there is no step-up. Add a third weaver to get started.

☐ Wale for three rounds.

☐ Pair for one round opening all the stakes singly.

Chain pair for six more rounds. See Basketry chapter 6, page 917.

☐ Wale for three rounds pulling the weaving tight to draw up the edges.

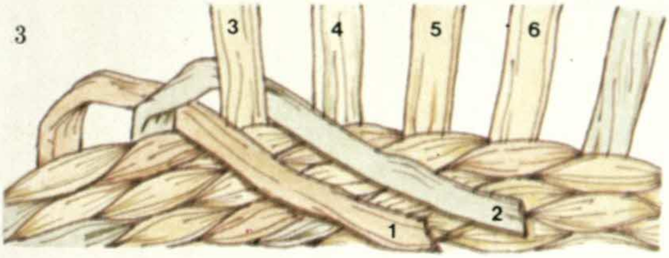
2-rod border

You can put on any of the simpler borders (Basketry chapter 12, page 1417) or try a 2-rod border.

☐ Hold the bowl with the underside towards you. Bend down any stake (1), behind the next (2), then 2 behind 3 (fig.3).

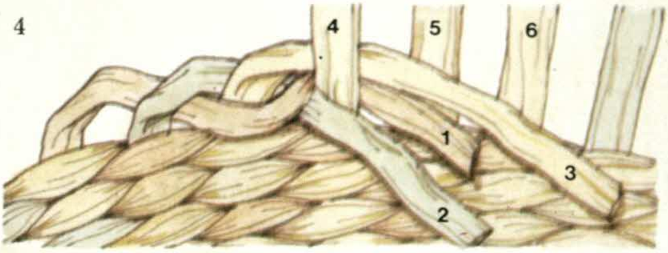
☐ Take stake 1 in front of stake 3, behind stake 4 and back to the front.

3



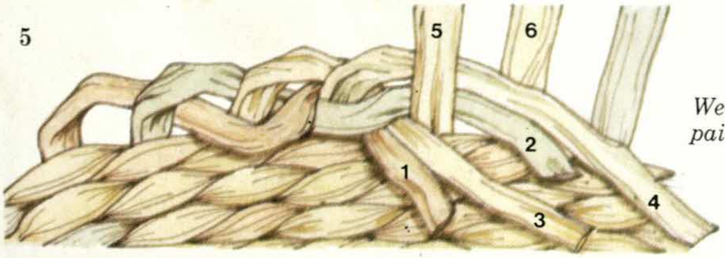
Starting the 2-rod border.

4



Second stage of border.

5



Weavers form pairs.

Paul Williams

Bend down stake 3 to lie beside but behind it (fig.4).

☐ Take stake 2 in front of stake 4, behind stake 5 and back to the front. Bend down stake 4 to lie beside but behind it (fig.5).

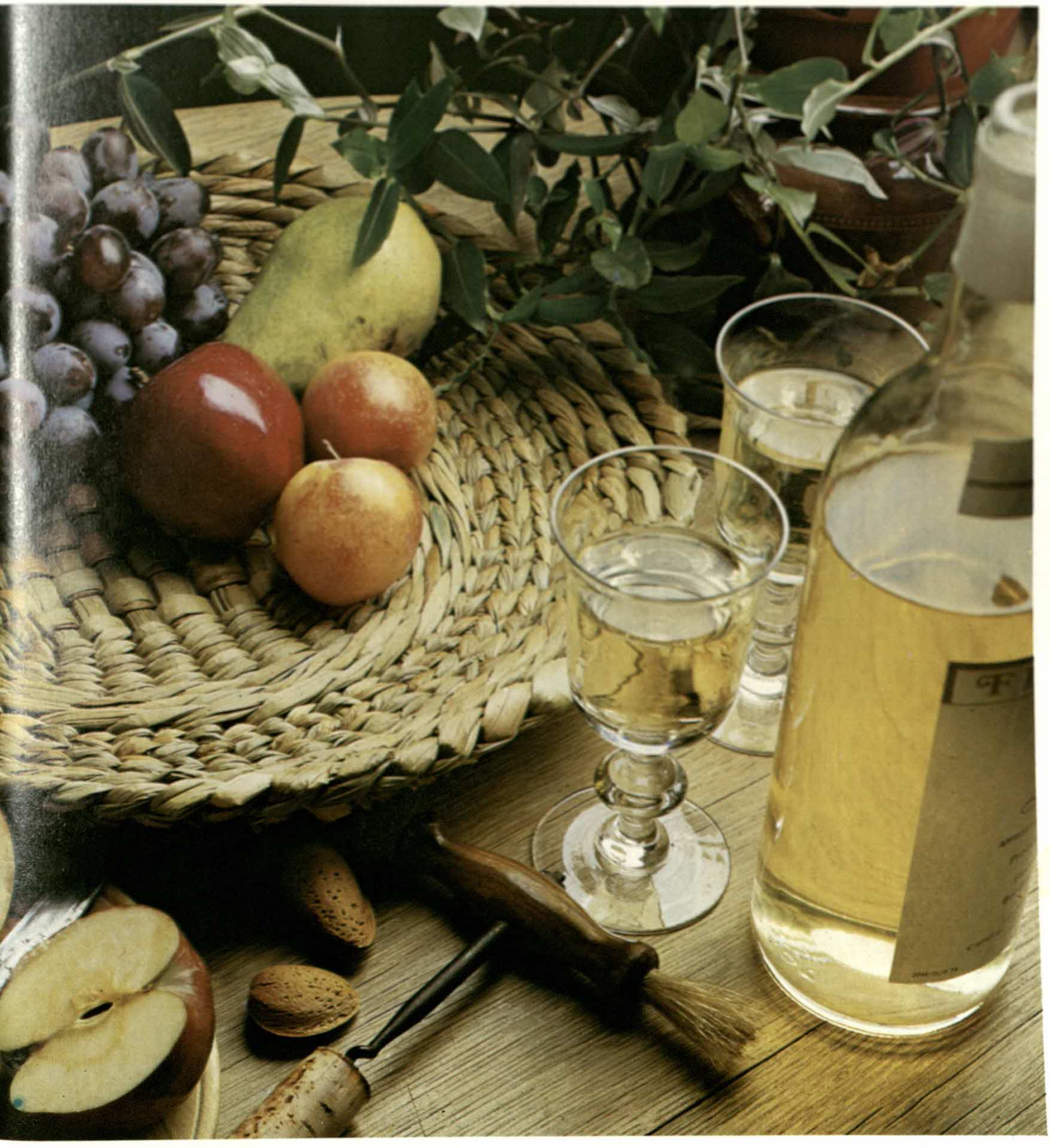
☐ Take the longer of the left pair (the third stake from the right) in front of one and behind one and bend the next upright down behind it.

In other words it is similar to a 3-rod border but with two pairs instead of three.

When you are left with one upright stake take the third from the right in front of the last upright stake and under the elbow of the first stake. Bend down the last stake under the first elbow.

☐ Weave the third from the right under the elbow of the second stake and the right-hand one of the last pair under the elbow of the third stake.

☐ Neaten all the ends by pulling them tight so that the border pulls the bowl in a bit more, and then cut off about 6mm (¼") below the border. Do not cut them off too tight as they have a tendency to slip through.



This attractive bowl is suitable for fruit, cheese or bread. It is finished with a 2-rod border but any other border can be put on instead.

Alan Duns

Hand-drawn Roman capitals

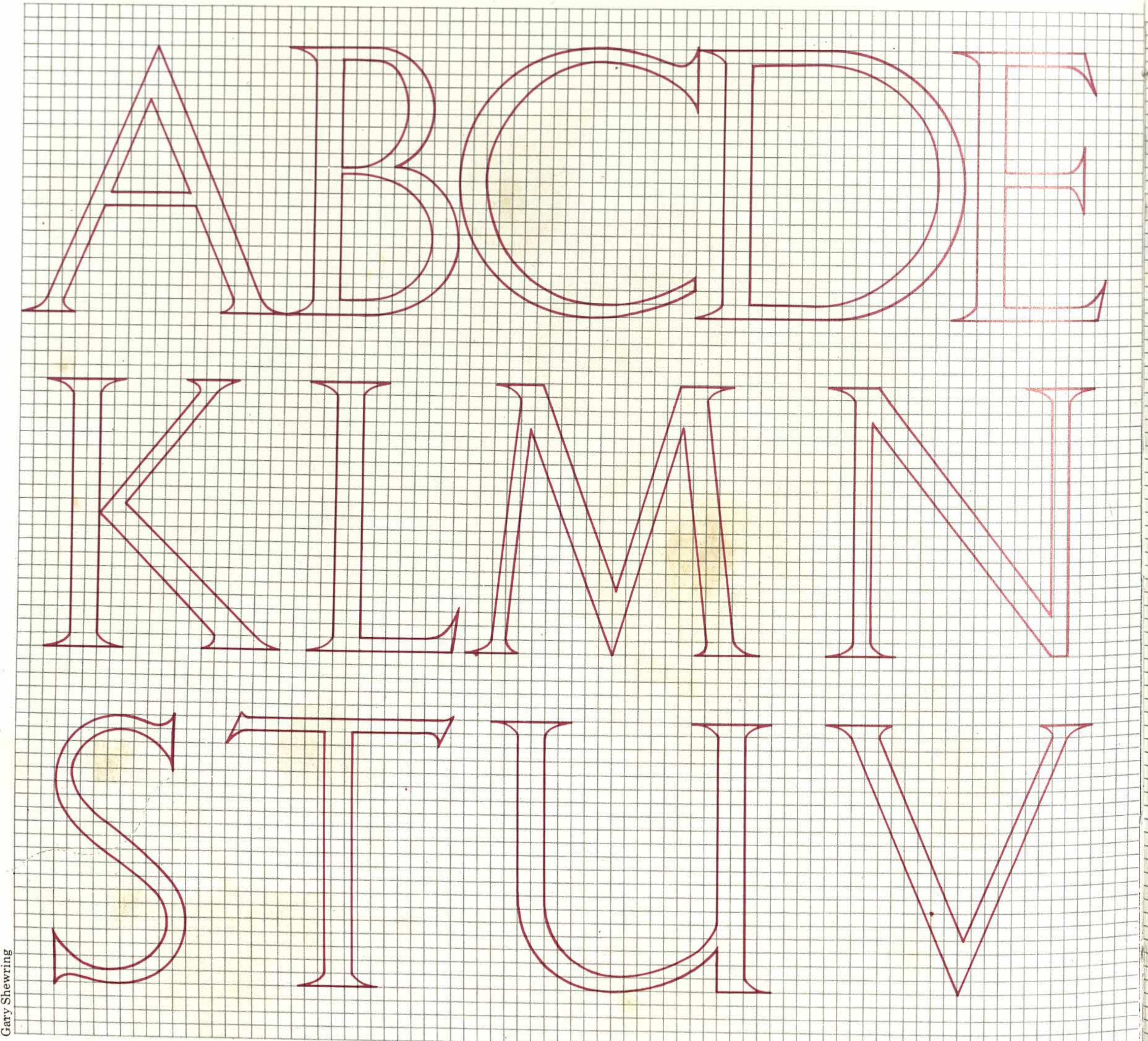
Design know-how 52

This chapter shows the proportions of Roman capitals. Normally this classical style of lettering should be drawn freehand, without the aid of rulers, compasses, or squared paper, but when you start to draw Roman capitals you may find the devices included here a help. However, as soon as you have sufficient confidence you should dispense with the drawing aids.

Roman capitals can be used in various crafts—metalwork, embroidery, wood carving, painting etc., but first of all it is necessary to learn the proportion and shape of each letter.

Fig.1 gives you the basic proportions of each letter. All the letters are the same height except for the Q, if you count the tail, but the widths of the letters vary considerably. The letters E, F and S, may seem surprisingly narrow, but these letters occur together rather frequently, and if they were made as wide as the letters O or D, they would give a very unbalanced effect.

In fig.2, all the letters of the alphabet are marked out on squared paper. This is to show you the exact proportions of each letter which you can copy square for square.



Gary Shewring

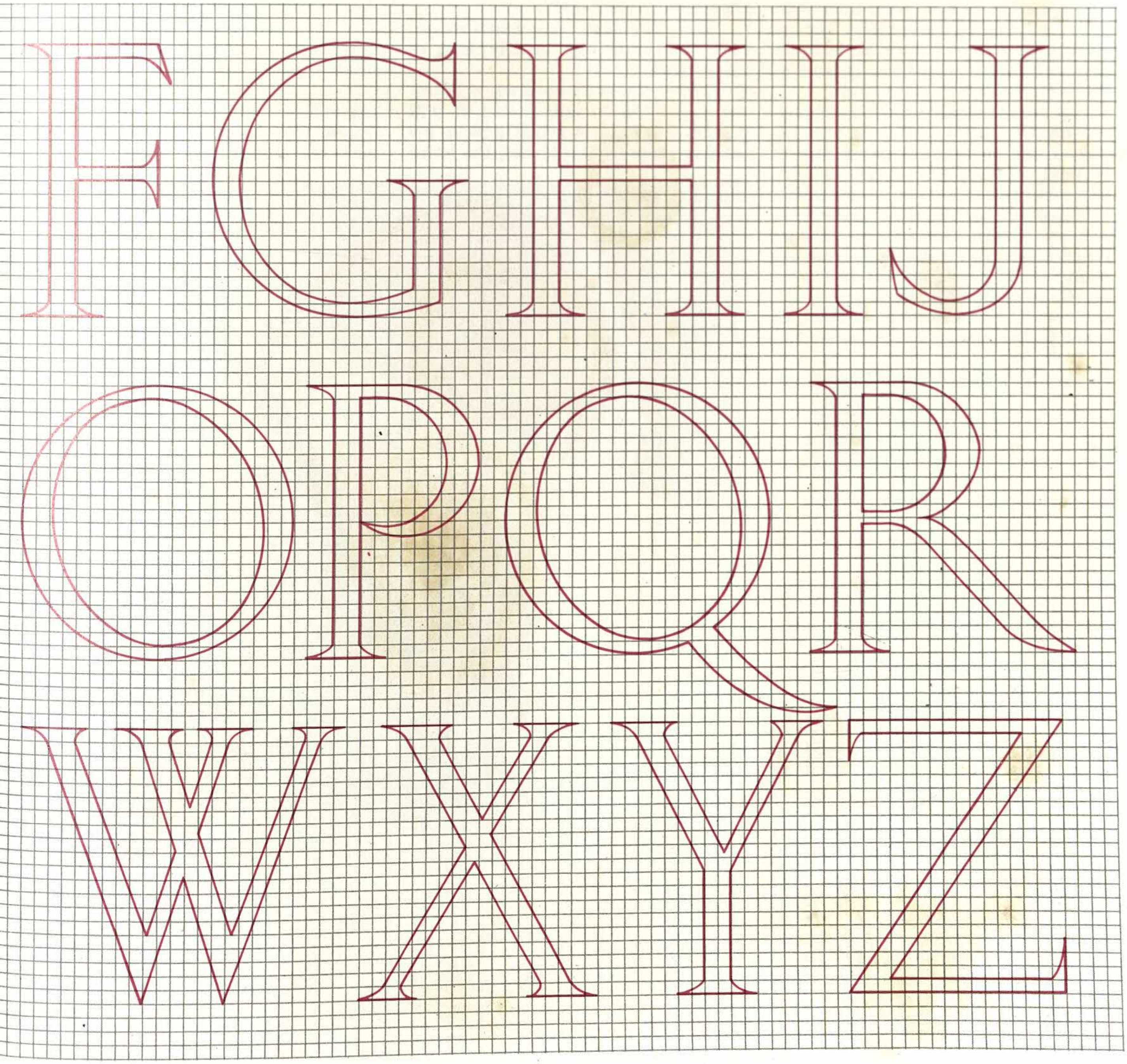
Letter	Width in no. of squares	Height in no. of squares
Q	25	24½ (counting tail)
W	24	
M	22	
U	21	
A, D, N, O, R, V	20	All other letters are 20 squares high
G	19	
C, H, K, X	18	
T	17	
Y, Z	16	
B, P	13	
J, E, L	12	
F	11	
S	10	
I	6	

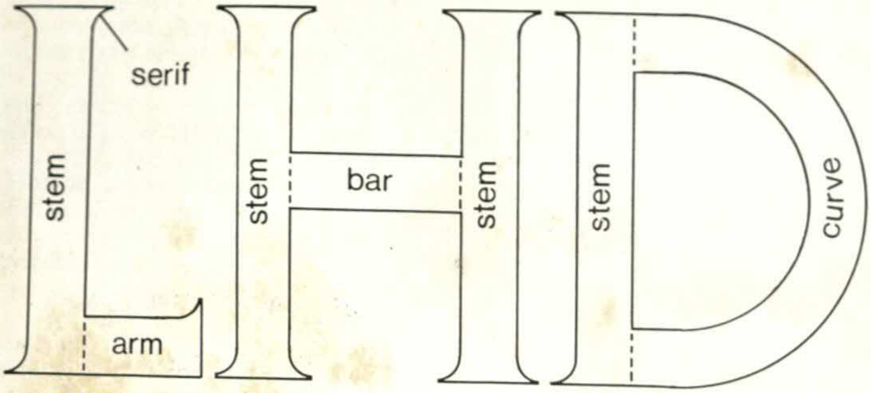
1. *This chart shows you the width and height in squares of each letter below. Measure the rectangle occupied by a letter before drawing the letter itself.*

Before starting to draw letters, there is a diagram overleaf in fig.3 on the names of the different parts

Stems, arms and bars can be drawn with a ruler. The thickness of these lines varies from one to two squares. You can make these lines slightly thinner or thicker according to per-

2. *(Below) a set of Roman capitals drawn out on squared paper. Use this as reference for the shape of each letter. Letters that are drawn freehand will not look as symmetrical as these.*





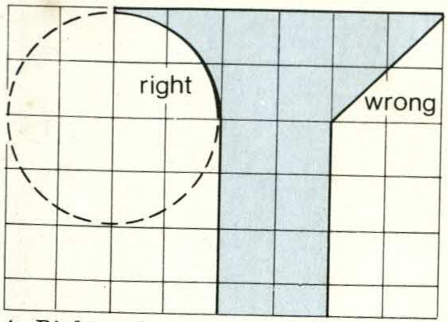
Paul Williams

3. The parts of a letter; stems run from top to bottom; arms are horizontal or diagonal limbs; bars join two parts.

sonal preference, but if you want your lettering to be seen from a distance, they must not be too thin. The horizontal strokes coming from the middle of B, E, F, H, and the diagonal coming from the centre of X, should be drawn coming from slightly above halfway up the letters, about 11 squares up.

Serifs are the small embellishments at the ends of arms and stems. Serifs extend two squares on either side of vertical strokes; one square on one side and two squares on the other side of diagonal strokes. Serifs appear on one or two sides of horizontal strokes. Be careful not to make serifs look like triangles. The serif should be curved like the arc of a circle, fig.4.

Curves. The outer curves of C, D, G, O and Q, are all semi-circles, and can be drawn with compasses. The inner curves are not so straightforward: these must be drawn freehand. Care should be taken to get these curves absolutely smooth. It is much easier to draw a smooth curve if your hand is on the inside of the curve as shown.



4. *Right and wrong way to draw serifs.*

Drawing Roman capitals

Materials. You will need one A2 sheet of 3mm ($\frac{1}{8}''$) squared paper; it is best to start on large squares as you can see exactly what you are doing, but any size will do as long as you count the squares correctly. Obviously the larger the size of the squares, the larger your letters will be.

You will also need a fairly hard pencil, such as an H, an eraser, a pair of compasses, and a ruler.

After you have drawn a set of letters you will need other materials for using the letters in craft work.

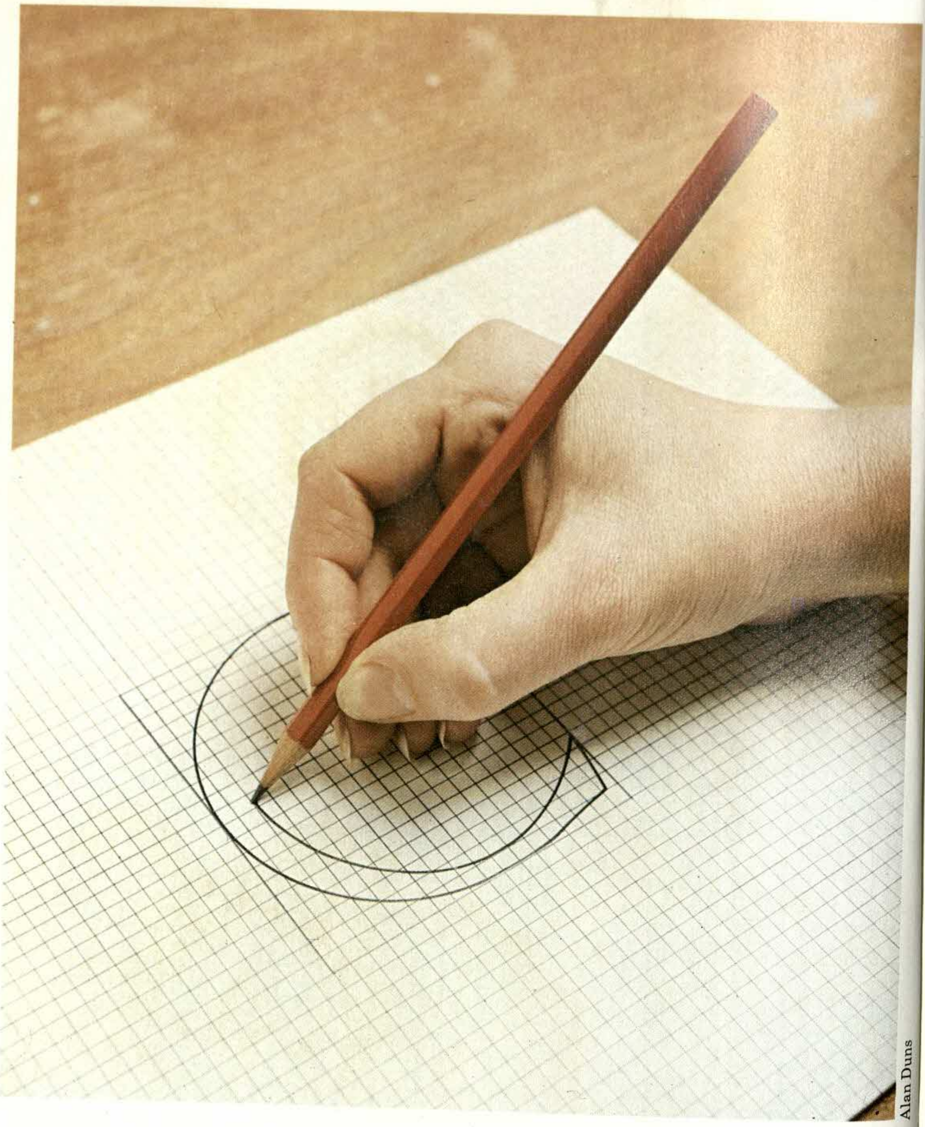
☐ Find a flat clean surface to work on, messy surroundings usually lead to messy work.

☐ Before you start to draw a letter, mark out the rectangle that it will occupy. The letter A will fill a rectangle of 20 squares by 20 squares, the letter B, a rectangle of 20 squares by 13 squares.

☐ When you have drawn the rectangle start drawing in the actual letter. Count the squares very carefully; if you get these wrong, the proportions of your letter will be wrong. If you work in pencil, any mistakes can be rubbed out and redrawn.

☐ Continue practising and drawing until you have gained enough confidence to draw the letters freehand. Do not worry if the letters you draw freehand do not look as regular as the ones you have drawn on graph paper. Look at other examples of hand-drawn Roman capitals and you will see that they are never perfectly symmetrical. Keep a set of Roman capitals drawn on graph paper for reference.

You will find that curves are easier to draw if your hand is positioned on the inside of the curve.



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